Partial Index for "Setup" examples

1990 JAN 15/16 150 l/mm grating in Fiberfed PCS mode, 4200Å
Note Subtract ≈ 6.5° from Fibfed grating angles for Reg Tel Cass setup.

Spectr. Te
Focus ...
Spectr. Te
Exp. Mtr.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							DAVID DUNLAP			OBSERVATORY	
							74" LOGBOOK				
							VOL 64				
							PLATE NOS 0-206				
							OCTOBER 1989 - APRIL 1990				

5 pg 41

Date 89 Oct 25/26 Wed/Thurs Observers FdS/FRM/Tn/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
0	Prompted Flat							Tung	20	
1	Comp							ThA	10s	
2	Vega	18 33.3	+38 41	18 02	1807	01 29 W	+38 53		5m	20000
3	Comp							ThA	10	
4	Comp			1817				ThA	10	
5	HD 11415 ECAS	01 47 11	+63 10 40	18 23	1923	4 32 E	+63 43		1m	5250
6	comp								10	
7	HD 11415	01 47 11	+63 10 40	19 27	2027	3 29 E			1m	5188
8	Comp								10	
9	HD 22928 5 Per	03 35 48	+47 28 4	20 34	21 34	4 11 E	+47 49		1m	7144
10	Comp								10	745
11	Comp								10	
12	HD 11415 ECas	01 47 11	+63 10 40	21 43	22 17	1 39 E	+63 44		34m	16100
13	Comp								10	700
14	comp									

Spectr. Temp. ..... Dome Temp./Hum. 16°C/77% Transparency Conditions ... Haze .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion (x grating)	P.H. order	Program	Remarks	Quality
				Echelle	19.9	H 400 W 105	~~4820Å~~ ~~4640~~	127	4481 Å x prob of 4927	Dewar tilt 2.5	1213
											2108
20000									Fds - lpv		5553
											2157
											2112
5250		3.38	B3III								1555
											2047
5188											1860
											2029
7144		3.00	B5III							Loud bang heard at 20:40	2386
745											2215
											2209
6000											2050
800											2194
		4.9/120									2240

7

#2

Date 1989 Oct 25/26 Observers F.d.s/F.R.M./T.A./S.A.S....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
15	HD 22928 SAO	03 35 48	+47 28 4	22 27	23 04	24 E			37m	8000
16	Comp								10	
17	Comp							ThA	10s	
18	HD 11415 ECas	01 47.2	+63 11	23 10	23 40	00 16 E			30m	
19	Comp							ThA	10	
20	Comp								10	
21	HD 35468 ζ Ori	05 19.8	+6 16	23 54	00 14	E	+		20m	8000
22	comp								10	
	4 flats @ 20s	1550, 1512, 1489, 1523								
	4 flats @ 27	1948, 1989, 1930, 1948								
	4 flats @ 34	2489, 2446, 2490, 2447								
	4 flats @ 45	3217, 3205, 3329, 3251								
	2 flats @ 65	4889, 4659								

Spectr. Te
Focus....
Spectr. Te

Spectr. Temp. ..... Dome Temp./Hum. +13°C 89% Transparency Conditions Slhazy 8

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +12°C 92%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. Orders	Program	Remarks	Quality
8000		3.00	B5III	Echelle	B 1891	H 100u W 105u	~~A820H~~ 4481Å	127	~~Echo~~ x tilt@	4927	3108
											2176
											2222
		3.38	B3III								1952
									Dewar Top-up @ 2345 T=0.145		2413
											2459
8000		V 1.64	B2III								2167
											2531

9 pg #1 Thurs-Fri

Date 1989 Oct 26/27 Observers F.d.s - Tq

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
0	Prompted flat					~2 W	+39°	Tung	25s	
1	Comp								10s	
2	HD 172167 Vega	18 33.3	+ 38 41	18 03	18 07	01 33W			4min	20 000
3	Comp								10	
4	Comp for Deneb								10	
5	HD 197345 Deneb	20 38 1	+44 55	18 12	18 21	00 16E			9min	20 000
6	Comp								10	
7	Comp								10	
8	HD 11415 ECAS	01 47.2	+63 11	18 29	19 29	04 21E			1hr	7141
9	Comp								10s	
10	HD 11415 ECAS	01 47.2	+63 11	19 32	20 25	03 25E	+6344		53m	
11	Comp								10s	
12	comp								10	
13	HD 22928 SPec	03 35 48	+47 28 4	20 33	21 23	0415E	+4749		50m	8004
14	comp								10	
15	comp								10	

Spectr. Temp. ..... Dome Temp./Hum. 16.9°C / 66%H 72° outside celsius Transparency Conditions ..... 5/ hazy 10

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. ORDER	Program	Remarks	Quality
				Echelle Ref	18.91	H 400u 105u	4481Å .4927	127			1408
											2817
20 000		0.04	A0V								5010
											2414
											2450
20 000		1.26	A2Ia								4345
											2310
											2189
7141		3.35	B3III								2478
											2140
		3.35	B3III								2550
											2158
											2240
80.04		3.00	B5III								2233
											2269
											2277

11 pg#2

Emulsion Batches:

Date . 1.9.89. Oct. 26/27. Observers . F.d.S - T.m

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
16	HD 32630 η Aur	04 59 30	+41 05	21 30	22 30	0400E	+41 18		1m	6.774
17	comp								10	
18	comp								10	
19	HD 11415 ε Cas	01 47.2	+63 11	22 37	23 12	0038E			35m	8.09
20	comp								10	
21	comp								10	
22	HD 32630 η Aur	04 59 30	+41 05	23 24	00 03	259E			39m	8.09
23	comp								10	
24	comp								10	
25	HD 35468 δ Ori	05 19.8	+6 16	00 11	00 23	257E			12m	8.285
26	Comp							THA	40s	
27	comp								10	
28	HD 11415 ε Cas HD 32630 η Aur	01 47.2	+6311	0033	0057	0107W			24m	8.09
29	Comp								15s	
30	comp								10	

Spectr. Temp. ..... Dome Temp./Hum +15°C 77% Transparency Conditions ..Hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
6744		3.17	B3V	Echelle	18.91	400H 105W	4481 8 .4927	IIT			1981
											2202
											2217
8009		3.38	B3III								2213
											2286
										T=+0.122 Topup @ 2314	2273
8009		3.17	B3V								2678
											2283
											2397
8285		1.64	B2III								2531
											2442
8009		3.38	B3III								2300
											2961
											2514

13 #3

Emulsion Batches:

Date 1989 Oct 26/27 Observers Fds-To

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
31	HD32630 η AUR	04 59 30	+41 05	01 04	01 31	0131 E			27m
32	COMP								10
33	COMP								10
34	HD35468 χ ORI	05 19.8	+6 16	01 35	01 44	0136E	+6 25		9m
35	COMP								10
36	COMP								10
37	HD22928 δ PER	03 35 48	+47 28 4	01 50	02 05	00 30W			15m
38	COMP								10
39	COMP								10
40	HD11415 ECAS	01 47.2	+63 11	02 12	02 36	0237W	+63 45		24m
41	COMP								10
42	COMP								10
43	HP32630 η AUR	04 59 30	+41 05	02 40	02 58				18m
44	COMP								10
45	COMP								10

Spectr. Temp. ..... Dome Temp./Hum. +14°C ... 76.8°C Transparency Conditions ... Slt hazy ...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8025		3.17	B3V	Echelle	18.91 H W	40μ 105μ	4481 Å .4927	127			2701
											2753
											2819
9035		1.64	B2III								2824
											2382
											2352
8014		3.00	B5III								2410
											2341
											2459
8004		3.38	B3III								2552
											2461
											2538
8014		3.17	B3V								2539
											2417
											2467

15 #4

Emulsion Batches:

Date ..1984 Oct 26/27.. Observers ..Fus-Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46	HD 34568 βORI	05 19·8	+6 16	03 02	03 08			F	6m
47	comp							ThAR	10s
48	comp								10s
49	HD 32630 ηAUR	04 54·30	+41 05	03 12	03 29		+41 21		17m
50	comp								10
51	comp								10
52	HD 34568 βORI	05 19·8	+6 16	03 33	03 40				7m
53	comp								10s
54	comp								10s
55	HD 32630 ηAur	04 54·30	+41 05	03 45	04 04		+41 21		19m
56	comp								10
57	comp								10
58	HD 22928 ωPer	03 35 48	+47 28	04 08	04 29		+		21m
59	comp								10
60	comp								10

Spectr. Temp. ..... Dome Temp./Hum. ...+14.2°C..77.6% Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

MiRA ≃ V=3.5 - about same as α Cet
SAME previous night too Tq

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
9028		1.64	B2 III								2768
											2708
											2480
8010		3.17	B3 V								2537
											2427
											2456
9000		1.64	B2 III								3058
											2440
											2497
8009		3.17	B3 V								2600
											2397
											2454
8008		3.00	B5 IV								2630
											2381
											2405

17 #5

Date 1984 Oct 26/27 Observers ... Fds-Tm

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
61	HD 34568 χ Ori	05 19.8	+6 16	04 33	04 41				8m
62	comp							TMAR	10sa
			Last Topup before Flats						
	4 flats @ 32sec	2004, 2009, 2062, 2003		04 55					
	4 flats @ 37sec	2283, 2268, 2252, 2265							
	4 flats @ 45sec	2769, 2737, 2731, 2794							
	4 flats @ 40.5sec	2436, 2440, 2454, 2457							
	2 flats @ 84sec	4973,	5041						

Spectr. Temp. ..... Dome Temp./Hum. +14°C 80% Transparency Conditions ... sl. hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8006		1-64	132III								2500
											2482
										Ret. Dat = 684,416 6/10	
										Bactel Upas at 2684.DAT	
										Repack done-	
										Kermit to Vax started	

19 #1

Fri - Sat

Date 1929 Oct 27/28 Observers Fds - Tz

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Temp / Focus / Spectr. Temp / Exp. Mir
1	Prompted flat								30s	
2	comp								10s	
3	comp								10s	
4	HD172167 Vega	18 33.3	+38 41	18 11	18 14	01 47W	+38 49		3m	2000
5	Comp								10	
6	Comp								10	
7	HD 197345 Deneb	20 38.1	+44 55	18 23	18 32	00 01W			9m	2000
8	comp								10	
9	comp								10	
10	HD 11415 ECAS	01 47.2	+63 11	18 43	19 25	0422E			42m	8000
11	Comp								10s	
12	comp								10s	
13	HD 11415 ECAS	01 47.2	+63 11	19 28	20 06	0340E	+63 41		38m	8000
14	Comp								10s	
15	comp								10s	

Spectr. Temp. ..... Dome Temp./Hum. 47.E. 64% Transparency Conditions . thin cirrus haze .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. ORDER	Program	Remarks	Quality
				Echelle Ref	18.91	400H 105V	4481Å .4927 x-3	127		Topup just before start	1891
										not essential or useful	
										use for Vega	2356
20000		V 004	A0 V								6222
											2359
											2242
20172		V 1.26	A2Ia								5399
											2256
											2265
8000		3.38	B3 III								2696
											2341
											2387
8000		3.58	B 3III								2903
											2762
											2789

21 #2

Emulsion Batches: .....

Date 1989 Oct 27/28 Observers F.ds.-T.r..... .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Spectr. Temp / Focus / Spectr. Temp / Exp Mtr
16	HD 22928 δ Per	03 35 48	+47 28	20 13	20 51	0444 E	+47 46		38m	
17	Comp							TH AR	10	
18	Comp								10	
19	HD 32630 η Aur	04 59 30	+41 05	20 56	21 56	0502 E			1hr	7397
20	Comp								10	
21	Comp								10	
23	HD 11415 ECAS	01 47.2	+63 11	22 04	22 37	0109E			33m	6013
24	comp								10	
25	comp								10	
26	HD 32630 η Aur	04 59 30	+41 05	8243	23 31	325E	+41 16			7950
27	comp								10s	
28	comp									
29	HD 34565 ζ Ori	05 19.8	+6 16	23 37	23 56	E				Food
30	comp								10	
31	comp								10	

Spectr. Temp. ..... Dome Temp./Hum. +15°3 ... 66.7% Transparency Conditions ... S. Hazy ... 22

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. GRADE	Program	Remarks	Quality
		3.00	B5 III	Echelle Ref	18.91	H=400u W=105u	4481Å 4927 x 44	127		T=+0.129	2744
											2388
											2477
7397		3.17 V	B3 V							T=+0.131	2376
											2513
											0545
8013		3.38	B3 II							T=+0.129	2644
											2330
											2434
7950		3.17 V	B3 V								3190
											2399
											2453
8000		1.64	B2 III							T=+0.135	2740
									Top w/ @0000		2574
											2475

23

#3

Date 1.9.89. oct. 27/28. Observers Eds.-Ta.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
32	HD11415 ECAS	147.2	+63 11	00 15	00 41	00 55W			26m
33	Comp							Th-Ar	10s
34	Comp								10s
35	HD32360 MAUR	04 59 30	+41 05	00 48	01 09	01 47E			
36	comp								10
37	Comp								10
38	HD23928 δPer	03 35 48	+41 28	01 24	01 45	W			
39	Comp								10
40	Comp								10
41	HD11415 ECAS	01 97.2	+63 11	01 49	02 16	02 30W			27m
42	comp								10
43	comp								10
44	HD34578 KORI	5 19.8	+6 16	02 20	02 28				8m
45	Comp								10
46	Comp								10

Spectr. Temp. ..... Dome Temp./Hum. 13.7°C / H 72%? Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Topup @ 00EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. ORDER	Program	Remarks	Quality
		3.38	B3 III	Echelle Ref	18.91	4400 Å W 105u	4481	127		T = +0.135	2358
											2446
											2513
		3.17	B3 V								2884
											2553
											2604
8001		3.00	B5 III							T = +0.141	2412
											2545
											2531
8018		3.38	B3 III								2486
											2557
											2554
8015		1.64	B2 III								2617
											2624
											2647

25 #4

Emulsion Batches:

Date .1989..Oct.27/28.. Observers .Fels.-T.n.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47	HD 32360 ηAur	04 59 30	+41 05	02 33	03 10	00 13 W			37"
48	comp								10s
49	HD 32360 ηAur	04 59 30	+41 05	03 12	03 41	00 44 W			29"
	comp								10
	comp								10
	HD 34568 βOri	05 19.8	+6 16	03 45	03 55	W			10"
	comp								10"
	comp								10"
	HD22928 βPer	03 35 48	+47 25	0359	04 23	W			24"
	comp								10
	comp								10
	HD 32630 ηAur	04 59 30	+41 05	04 27	04 54	01 57 W			27"
	comp								10
	comp								10
	HD 34568 βOri	05 19.8	+6 16	04 59	05 08				9"
	comp								10

Spectr. Temp. ..... Dome Temp./Hum. 13.5° 75% Transparency Conditions Hazy → 5/Fog 26

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. ORDER	Program	Remarks	Quality
8080		3.17	B3V	)				127			2606
											2598
		3.17	B3V								2511
											2612
											2696
8049		1.64	B2III							T=+0.139	2632
											2635
											2666
7975		3.00	B5III							T=+0.140	2406
											2579
											2635
8005		3.17	B3V								2577
											2590
											2555
8020		1.64	B2III								2564
											2612

#5

Date 1989 Oct 27/28 Observers F.d.s.-T.n.

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
	4 flats @ 43.5s	2408, 2412, 2390, 2411								
	4 flats @ 47s	2570, 2578, 2579, 2602								
	4 flats @ 49.5	2730, 2732, 2729, 2734								
	4 flats @ 53	2930, 2932, 2913, 2917								
	2 flats @ 95	5238, 5227				T = .141				
1989 Oct 28/29		SAT-SUN								
229 In	See my Test HD207754	21 50.2 (2000)	+43 53	19 40		00 00	+43 47	"N" mode		31x31
230 TN	HD197433 VW Cep	20 38.6 (1900)	+75 14	20 06		01 40W	+75 37	"N" mode		39x39
		20 38.9 (1989.5)	+75 27	given 1989.5 posns dont work out.						(Note,

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	~~P.H.~~ Order	Program	Remarks	Quality
				Echelle	18.91	400 μ 105 w	4481	127			
31x31		7.3 ✓	KOIII	Int x 4	Fiber Head view		4 frames		Dome fucd, west (No wind at all) Hazy	Field Drawn Header date (Tues) says MAR 28 89	
39x39				Int x 4			4 frames		Hdy request	Slight NE breeze	
(Note, On CCD; both image (of Previous Hdy request) acquisition and fiber head guiding view showed no other components)											

29

SAT SUN

Date 1989 Oct 28/29 Observers Fds - Th

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Prompt eq flat								60s
	Comp for δ Per			21 49				Th-Ar	10s
	HD22928 δ Per	03 35.8	+47 28	21 53	22 34	02 55 E	+47 49		41m
	comp								10
	comp								10s
	HD11415 ecas	1h 47.2	+63 11	22 42	23 30	00 11 E	+63 41		48m
	Comp								10s
	comp								10s
	HD32560 η Aur	04 59 30	+41 05	23 38	00 36	02 16 E			58m
	Comp								10s
	comp								10s
	HD34565 ξ Ori	05 19.8	+6 16	00 42	00 54	02 16 E	+6 23		12m
	comp								10s
	4 flats @ 56s comp	3454, 3321, 3306, 3298							
	4 flats @ 45s	2680, 2699, 2705, 2684							

Spectr. Temp. ..... Dome Temp./Hum. +13°C ... 75?% Transparency Conditions .. Hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Echelle Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				~~Echelle Ret~~ 18-91	18-91	~~W=400~~ W=1056	4481Å x-prism 4427	127		Reticon still cooling, not yet stabilized	3513
										T=+0.062 by 21145	2466
		3.00	B5 III							T=+0.092 / T=+0.122 at 21:56	3132
										T end = +.143.	2402
											2335
6644		3.35	B3 III							T = +.144	2323
											2453
		~~3.17~~	~~B3 V~~								2403
		3.17	B3 V							T=+0.146	3247
											2603
											2653
8000		1.64	B2 III								2764
											2590
											~~2259~~

31 SAT-SUN

Date 1989 Oct 28/29 Observers Fds-Th

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	comp							Th-AR	10sec
	HD 22928 dPer	03 35.8	+ 47 28	01 16	01 53	00 15 W	+		37m
	comp								10s
	—								
	comp							Th-AA	10sec
	HD 14386 Mira	02h 14.3	−3° 26′	02 11	03 41	03 35 W	−2 59		1hr 30m
	comp								10s
	4 flats @ 11s	2270, 2245, 2238, 2216							

Spectr. Temp. ..... Dome Temp./Hum. +12°C 78% Transparency Conditions ... Some cloudy 32

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion λ	P.H. ORDER	Program	Remarks	Quality
				Echelle Ref	18·71	105μ	4481Å	127			2204
		V 3·00	B5III								2255
											2451
				Echelle Ref	19.1	150μ	4820Å	118	mira emission		
											1585
25440		#V ~3·4	M5SIIIe							Cloud #About as bat as α Cet	2242
											1608

33 Syn-mon Pg #1

Emulsion Batches:

Date 1989 Oct 29/30 Observers MHr-Tu

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2049	Comp			1822	1827			FeA A=1/2	300s
50	HD197433 VW Cep	20 38.8	+75 14.3	1844	1915	0054 W	+7537		1800
51	Comp						"	FeA A=1/2	300
52	BM Cass	00 48.6	+63 33	1927	1957	0242 E	+6404		1800
53	Comp						"		300
54	HD 3765	00 35.3	+39 40	2013	2023	0200 E	+4012		600
55	Comp							FeA A=1/2	300
56	PUVul	20 19.0 1950	+21 25 1950	2141	2151	0350 W	+21° 32		600
57	Comp	20 19.0	+21 25					FeA A=1/2	300
58	Sky near PUVul	"	"	2201	2211	0408 W	+21° 32		600
60	PUVul	20 19.0	+21 25	2213	2223	0419 W	"		600
61	Comp						"	FeA A=1/2	300
62	PUVul	20 19.0	+21 25	2237	2257	0453 W	"		1200
63	Sky ≈ 20 min East of PUVul					W	"		1200
2064	Comp								300

Spectr. Temp. ..... Dome Temp./Hum. 16°C 66%H Transparency Conditions Hazy → Slt cloudy 34

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
160				PCS Red Col	831 ~~1800~~ 1398	BS	6600Å	IA	*		
Counts as high as 1600		7.8-8.2						IB	600+1200 secs	"B" channel out. cloud	
170 12								IA			
500 21		✓ ≈9						IA		part cloudy	
145 10								IA			
2500 30		✓ 7.36	dK5					IA		field drum	
150 14								IA			
500								IA	[Forgot to change hand]	Str Hα emission	
160 8								IA			
5 | 10 | <10	THERE IS NO 2059							IA			
700 15								IB	[Note start end time on hand-op memory]		
(Note This record same size as previous ?)								IA	Same times as for this comp		
100 10								IA	ND 0.6 in stellar beam		
210 <10								IA	ND 0.6 still in; PART cloudy now		
								IA			

35 #2

Emulsion Batches:

Date 1989 Oct 29/30 Observers MKi - Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
2065	HD 12029	01 53.0	+28 54	23 33	23 43	00 01 W	+29 22		600s
	Comp							Fe A A-1/2	300
2067	V471 Tau	03 44.7	+16 57	00 05	00: 25	0107 E			1200
	V471 Tau	"	"	00:30	00 50	00 42 E	+17 15		1200
	Comp								300
	V471 Tau	03 44.7	+16 57	01 02	01 22	00 10 E			
	V 471 Tau	"	"	01 24	01 44	00 12 W			1200
	Comp					V			300
	V 471 Tau	03 44.7	+16 57	01 53	0213	0040 W			1200
	"	"	"	02 16	0236	01 04 W			1200
2075 MKi	Comp								
2076	V 471 TAU	03 44.7	+16 57	02 43	0303	W			1200
	"	"	"	03 06		W			1200
	Comp								300
2077	V471 Tau	03 44.7	+16 57	0306	03 26				1200

Spectr. Temp. ..... Dome Temp./Hum. 71°F 75% Transparency Conditions. Hazy → cloudy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Mira still appears a V=3.5 s/l fainter than 2 Cet, but in more haze.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
* 700 20		7.80	K2 III	PCS RdCol.	831 ~~1800~~/39.8°	BS	Hd a	IA	std/col	s/cloudy * (ND 0.6 still in beam)	
								IB			
		V 9.4-9.7	K0 V					IA	note RAs & Decins had/or not correct. ND out now		
600 15								IA			
150 10								IA			
300 10								IA		hazy	
400 10								IA			
160 10								IA			
400								IA			
600 10								IA			
								IA			
350 10								IA			
~~350 10~~								IA			
								IA			
										Noise counts when dome moves.	

37 #3

Emulsion Batches:

Date 1989 Oct 29/30 Observers mkt-Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2078	V471 Tau	03 44.7	+16 57	03 28	03 48	W			1200
~~2079~~	Comp.			0				FeH	
2080	V471 Tau			03 56	04 16	W	+17 15		1200
	"			04 17	04 37	W		Fe	1200
2082	Comp							FeAr A-V2	300
	V471 Tau			04 45	05 05	W			1200
	"			05 06	05 26	W			1200
2085	Comp								300
2086	V471 Tau	03 44.7	+16 57	05 33	05 54	04 22W	+17 15		1200
2087	Sky Spectrum			05 56	06 06	01 20W	+17 15		600
2088	Comp						"		300
2089	Flat on timer			06 26		platform	ND 1.2	Tung A-V16	7200

Spectr. Temp. ..... Dome Temp./Hum. 10°C 77% Transparency Conditions .. hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 9°C 82% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
500 10			HOV	PCS	831 1800/34°8	BS	4α	IA			
165 12								〃			
400 10								〃			
500 14								〃			
160 8								〃			
								〃			
								〃			
								IA			
300 10								IA			
<10/40								IA			
160 12								IA			
2650 44								IA	Note ND 1.2 in place. (It doesn't quite fit holder)		

39 Mon-Tues Pg#1 New D-19

Date 1989 Oct 30/31 Observers AG-TR-BT

8m 68° Emulsion Batches: IIaO.e. 258 ... 11 Oct/89
3m 68° 4415. Filter (Black Kg. Oven on)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
50688	HD 206778	21 39.3	+09 25	18 30.5	18 54	00 30 E	+9 52	FeNe Clear	80-80
50689	HD 214665	22 34.7	+56 17	20 05	20 50	00 30 W	+56 51	FeNe Clear	10-15
Note Not labelling Exp Film strips. ID should be obvious.									
50690	HD 14386 MIRA	02 14.3	-3 26	21 11	21 29	0230E	-2 57	FeNe Clear	IN 20-20
50691	HD 14386 MIRA	02 14.3	-3 26	2137	21 45	02 14E	-2 57	FeNe Clear	20-20
50692	"	"	"	21 58	22 57	0102E	"	FeNe Clear	50-50
50693	MIRA	02 14.3	-3 26	23 01	23 33	00 23 E	-2 57	FeNe Clear	50-50
50694	MIRA	02 14.3	-3 26	23 38	23 54	00 04E		"	50-50
50695	HD 19058 PER	02 58.8	+38 27	00 00	0,00	00 16W D4	+38 54 D3	" N2	50-50
50695T	Spot Calib for	50688;	50692→	96.	15 min @ 15V	3900	4300	4810	

Spectr. Temp. 60°F..... Dome Temp./Hum 13°C./89% Transparency Conditions ..Hazy - a few clouds 40

Focus 388 for G16, 390 for G12.

Spectr. Temp. ..56°F + 23 EST Dome Temp./Hum..... Diffuser IN, B Filter OUT for G16 1200/40.5 exps

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1443 + 9350	B filter in	B 3.98	K2 Ib	BC	G=5430 1200/40.8	BS	IIaO-e	1	stdvel	Diffuser OUT Exp meter counts 1600 = 80 secs	FeNe slit Fine
25000	no Filter for X meter	V 5.2	M4 II	BC	G=4270 1200/40.5	BS	4415 film	1	rG pgm	Diffuser IN 10sec = 600 counts for comp	
25000											
Note examples of 4415 film use on JAN 27/28/89									FeNe, Diffuser in, B filter out, 20sec x 2		
15 secs = 900 counts exp meter,									Exp meter counts for comp should be. 20sec = 5000		
15 sec FeNe = 2200 after Aperture wheel homed & brought back to "clear"											
80 000	no Filter for X meter	V 3.5		BC	G4270 1200/40.5	BS	4415 Film	1	rG pgm	(20 sec FeNe = 2800 counts)	
Note Focus Reset to 388, Temp = 55°F for 1st MiRA exp. Backing plate broke probably during the exposure											
43000		V 3.5	Ha Em	BC	G4270 1200/40.5	BS	4415 Film	1	rG pgm		
15077	B Filter in	V 3.5		BC	G4270 830/40.5	"	IIaO-e	1	"	T=55°F, Set 390 Diffuser OUT (50 sec FeNe = 556)	FeNe slit Fine
Note: June 24/25/89 thus good examples of Blue photographic work											
10,100		V 3.5		BC	830/40.5	BS	IIaO-e	1	rG pgm	830 grating hot/beam slightly off in tilt	
5,000		"		BC	G=4238 830/40.2	BS	IIaO-e	1	"	Exp OK ~~Blue end out of focus?~~	
15 000		V 3.5	M4 II	BC	830/40.2	BS	IIaO-e	1	"	Exp OK Blue end focus?	
							IIaO-e				

41 Pg #2

Mon-Tues

Date 1989 Oct 30/31 Observers Bt.-Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
50696	HD14386 MIRA	02 14.3	-3 26	01 12	02 07	0209W	-2 57	PeNe clear	50s
50696T	Spot Calib for	50689-91		15 min	D4 15V 4810	D2 7V Hα	D3 7V 5450		
	Oct 31/Nov 1/89 Tn - Rainy							Diffuser OUT	
50696F1	Focus Test	Set 390, T=57°f		18 50		0 0	0°	FeNe clear	80
50696F2	" "	Set 390, T=57°f		19 05		0 0	0°	"	400
50696F3	Green Focus	Test		20 53		0 0		FeNe Clear	300 300

Spectr. Temp. ..... Dome Temp./Hum 10.4°C ... 84% Transparency Conditions .. sl hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +10°C ... 86%

Exp. Mtr. & filter in	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
16000		Ba 5	Em	BC	830/402	BS	IIaO-e	1	Rg pgm	Diffuser OUT	Exp Fine Fiber sl-k
							4415 Film				vr
B filter											
1300/2110				BC	64238 830/40·2	BS	IIaOe	1	Comp posn = 80secs, Stellar posn = 50sec		center sl Red
6920/35K				BC	G=5430 1200/30·8	BS	IIaO-e	1	Comp posn = 400secs, Stellar posn = 250sec		center sl Red
B Filter									* much more due to Sp centring for Tilt		
5400/1500	T=46.5	f set 390			G=4890 1800/46	BS	IIaSe	1		Diff OUT	Center v sl Red

43

Wed-Thurs

Date 1989 NOV 1/2 Observers L23 [illegible]/Tn

Emulsion Batches:
new batch 4415 Film Nov 1/89

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
50697	HD14386 MiRH	02 143	-3 26	23 44	00 20	0033 W	-2 57	FeNe Clear	* *
	* Comp for previous exp ≈ 10 secs, 15 secs = 2950 cnts, 10 secs = 1300 cnts								
50697 T	Spot Calib for 50697-98,			15 mins	04 15 Volts 4810	02 7V Hα	03 7V 5450		
50698	HD 14386	02 143	-3 26	01 05 *	01 55	02 08 W	-2 57	FeNe Clear	30-20
[nothing much 01,05→01 30]		out of cloud at		01 30 - 0140					

Spectr. Temp. 4365 ..... Dome Temp./Hum. +3.5°C ..77% Transparency Conditions ... cloudy .....

Focus ..390 → 392 .....

Spectr. Temp. ..... Dome Temp./Hum. +3.3 ..... 77 Diffuser in for 4415 film FeNe exps

Exp. Mtr. no filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
29,300 + 13000		V ≈3.5	Hα	BC	G=4270 1200/40×5	BS	4415 Film	1	Rg pgm	(Time uncertain) ≈ 1/200 cuts for 1st FeNe	weak
(Generally 2×20 secs FeNe about Right)								Note 10 sec FeNe gives a 1300 ep meter cuts			
							4415 Film		Note glass plate 4×5 used as backing as is glass scrap strip used for film strips.		v
Note *5069 7-97 no filter				not labelled. (hor is 98)							
800	Prob Stg Spectrum			BC	1200/40×5	BS	4415 Film	1	Rg Pgm Focus set to 392	2500 cuts 1st comp Then cloudy —	blank

45

Date 1989 Nov 3/4 (Fri/Sat) Observers SAS/LZZ/cks

Emulsion Batches:
5h 68° IIIa-J-cfg. 1A7 1 Nov
8h 68° 120-e 218 11 Oct

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
50699	HD 198026 HR 7951	20h 42.5	-5° 24'	18 00	1957	1h47 W	-05° 01	FeNe Clear	2min
50700	HD14386 MIRA	02h 14.3	-3 26	20 16	22:14	1h25 E	-3° 00		2min
	M15 (1980)	21 29.1	+12 05	20 30	4x				
50700T	Spot Cal. for 50699, 50700, 50701. 15 minute in 24300, 24810, 25450 @ 15v, 15v, 7v (note used D2 instead								
50701	HD14386 Mira (com)	02h 14.3m	-3° 26'	22 53	0h 14	0h 32 W	-3° 00	FeNe clear	2min
50702	HD14386 Mira	02h 14.3m	-3° 26'	00. 44	01:07	1h25W	-3°00	FeNe clear	
50703	HD14386 Mira	02h 14.3m	-3° 26	1:22	1:37	1h55W	-3°00		
50704	HR921 β Per	2h 58.8m	+38° 27'	2:20 (2:53 start weakly)	2950	2h22W	-3°00		
50703T	Spot Cal to 50703		15min	3600 D4, 3900 D4, 4300 D3		15v			
50705	HD23862 Pleione	3h 43.2m	+2350	3:48	3:59	2h48W	+24°04'	FeNe	1min

Spectr. Temp. 40° Dome Temp./Hum. 0°C / 56% Transparency Conditions Clear

Focus 391

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr. B filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
12500		V 4.42 B 6.05	M3III	BC	G=4890 1800/46°	BS	IIIaJ	1	rG program	Diffuser out 2 min FeN : 2400 counts	Fine
15 200				BC	G=4890 1800/46°	BS	IIIaJ		rG Program	only 1 comp	s/ s/t
										JBL tour ~25 people	
(1 D3 on 5450)	good						IIaJ				✓
30 000		V 3.5	gM6e	BC	G=4890 1800/46° G=9238	BS	IIIaJ	1	rG Program	Diffuser OUT 2 min FeN = 2500 counts	S/t
10 000				BC	830/40.5°	BS	IIaO-e	1	rG Program	60 sec FeNe 1317	Fine Ems/t
5 000				BC	830/40.5°	BS	IIaO-e	1	rG Program	60 sec FeNe 1317	Fine
7 520		V 3.2	M4II-III	BV	830/40.5°	BS	IIaO-e	1	rG Program	1317	Fine
										1302 1325 FeNe	✓
7595		V 5.04	B8p		"		IIaO	1			V s/wk

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Date 89 Nov. Fri/Sat 10/11 Observers SAS/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.
0	Flat (prompted)		at posn of Vega			W		Tungsten	~~10~~ sec	17000
1	Comparison	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~				Th-AR	10s	~~[illegible]~~
2	Vega HD172167	18h 33.3	+38°41	19h 06	19h 10	3m 38 W	+38° 50			2.285
3	Comp								10s	
4	Comp			19h 23					10	
5	δ Per HD 22928	03h 35.8	+47 28	19 30	19 58	0339E	+47° 47′			3360
6	Comp							Th AR	10 sec	360
7-10	Flats x4	DRIVE off		20 08	20 12	0330E	+4747	Tung	22 sec	233K
11-14	Flats x4	for Vega		20 14			"	"		
15	Comp			22 20				Th-AR	10s	
16	δ Per HD22928	03 35.8	+4728	2224	22 47	149 E	+47° 48			521
17	Comp			22 49				Th-AR	10s	
	Flats x4	at Topup posn.		23 11		0300 W	+17°	Tung	31 sec ~~[illegible]~~ sec	1 334K

Spectr. Temp. ..... Dome Temp./Hum. +3.8°C 75% Transparency Conditions .. Clear...PARTLY.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Lower Finder found way off in Dec ≃ 1/2 fld Radius. :. Had to use lens to Renormalize finder center.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. or cr	Program	Remarks	Quality
										Top up just before obs START	ADU
17,000				Echelle Ret	18.93	H 400 W 105	4481 Å xgrd .4931	127	Fds program	dewar tilt 2.5	990
~~[illegible]~~											2118
20,285		V= 1.04	A0 V								5669
										T = +0.179	2093
		V= 3.00	B5								2141
3860		V 3.00	B5III	*Effective exp end ≃ 1950				due to cloud		T = +0.194 same cloud	1448
760				32 secs				23 secs for #4			2224
≃ 33K		1433, 1426, 1417, 1476								T = +0.194	
		5526, 5632, 5672, 5670							85-97 secs	T +0.194	
		~~confi~~									2095
5121		V 3.00	B5III						Fds pgm	T = +0.190 cloud began @ 32-42	1796
										filled dewar T: 0.186	2104
≃ 38K		1734, 1779, 1839, 1820								T = +0.184	1734

Backed up as NOV1089.DAT & Reported

Someone had disconnected 74' from Vax line

Sent as NOV1089.DAT next night.

49 Sat-Sun

Date 1989 Nov 11/12 Observers Miki-Tom-Sas

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2090.mki	Flat 2hrs	note 18605 bytes		17 11	19 11	0 0	platform	TUNG A=1/8	2hrs
forgot to WRITE.	PRINTED Though FLAT #2	? should be closer, no?		20 09	22 09	"	"	"	2hrs
2091.mki	FLAT #3	note 15662 bytes		22 13	00 13	"	"	"	2hrs
	Comparing plots indicated that FLAT #3 must have cut out early. ie FIFO failure								
2092.mki	FLAT Last Flat on Timer	16295 bytes		01 47	03 47	0 0	platform	TUNG A=1/8	2hrs
93	FLAT Nov 12/13	17616		17 38	19 38	"	"	"	
94	FLAT #2 Nov 12/13	16455		19 57	20 57	"	platform (just above)	TUNG A=1/2	1 hr
95	FLAT #3 Nov 12/13	16214		21 05	00 05	"	"	Tung A=1/16	3hr
96	FLAT #4	16503		00 08	01 08			TUNG A=1/8	1 hr
97.	DARK	4hrs	8993bytes	01 25	04 25				4hrs

Spectr. Temp. ..... Dome Temp./Hum +65°C ... 80% Transparency Conditions Clear - Thin Rain .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	P.H.	Program	Remarks	Quality
1750 65				PCS RedCol	831/3418	RS	6600 Å	IA	Peak at ≈ 5000 cnts	(ND in = 2.3) written	
1750 60				"	"	"	"	IB	Peak at ≈ 5000 cnts	ND = 2.3 5 channel cut at sometime	
1810 60				"	"	"	"	IB	≤5000 cnts	ND = 2.3 written	
? I'm sure the source was on for duration.											
1800 60								IA	≈ 5000 cnts	ND = 2.3 written	
1880 60				PCS RedCol	831/3418	RS	6600Å	IB	≈ 5000 cnts	ND = 2.3 written	
5150 170				"	"	"	"	IA	≈ 6000 cnts	ND = 2.3 + 0.6 cut out of way "B" channel cut near start	
1200 50				"	"	"	"	IB	≈ 5000 cnts peak	ND = 1.2 + 0.6 written "B" channel on at start "B" channel off near end	
3870 110				"	"	"	"	IA	≈ 5000 cnts peak	ND 1.2 + 0.6 written B on at start	
(8-20) both A+B								IA		written	

Note On Nov 13, I noted that dark signal went down from > 20 cnts to < 10 cnts by turning the light tight door slightly. Signal went down to < 4 cnts with "warm" Room Lights off. ∴ Previous nights "Dark" Exp. were too "dark" as lights were off anyway.

Date 1989 Nov. 13/14 (Mon/Tues) Observers Fds. To. SHS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp Mtr
0	Prompted flat									
1-4	4 flats @ 22s.	~1300								
5	comp							Th-Ar	10s	
6	HD22928 sPec	03° 35.8	+47 28	23 36	00 35	00 01 W	+47 47			2440
7	Comp							Th-Ar	20s	
8-11	4 flats @ 10s	572, 564, 554, 555								

*Note: Discovered that the primary mirror was completely fogged over with dew. This is why the exposure is so slow.

Nov 17/84 Cloudy ∴ just doing test Flats

2098	Flat		~18	20	00	platform		2hrs
2099	Flat #2 *	dark cats were (before exp) (a15-20)	2243		11	11		2hrs

*Note (1st attempt started @ 2200 EST Failed. ~2230 ie Both FIFO lights were noticed to be out.

Spectr. Temp. ..... Dome Temp./Hum. 13°/68% Transparency Conditions Hazy - cloudy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle Reticon	18.97	H400 W105	4481 Å x GRAT .4926	127	Eds program	Slit width .259, Dewar t.H 2.5	
2400		V 3.00	B5 III						Eds-pgm	70.144	5/9
											4273
							Top up @ 0045, I = 70.145				
3100				PCS Red Col	831/348	RS	6600Å	IA	warm Room lights off for EXP	Bulk	ur
105045				"	"	"	"	IA	Light Left on in warm room		ur
At the time, I was in PC mode trying to use and install 'VI' editors stuff. Tn											

53 Pg#1 SAT-SUN 900 21.*

Date 1989 Nov 18/19 Observers Hdy-Tn

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2	Comp							A=1/2 Fe Ar	200
2103	HD197433	20 38.6	+75 14	18 22	18 42	1h 38m W	+75 25		1200
4	Comp					01 40 W	"	Fe-Ar A-1/2	200
5	Flat			~18 00	~19 46	0 0		Tung A=1/83	2830
6	Comp			19 47			+75 36	Fe Ar A=1/2	200
7	HD197433 "C"	20 38.6	+75 14	19 53	20 23	03 20 W	+75 36		1800
8	Comp								200
2109	HD197433	20 38.6	+75 14	20 34	21 04	04 00 W	+75 36		1800
FM 000231.TN	"	"	"	21 10		04 06 W	"	31x31	Test x4
32.TN	HD199476	20 52.4	+74 23	21 20		04 08 W	+74 44	31x31	Int x4
	HD199476 [illegible]	"	"	21 22	21 47*	04 34 W	"		1800*
	Comp							Fe-Ar A=1/2	200
	HD199476	20 52.4	+74 23	21 55	22 17	05 05 W	+74 44		1800
	Comp						"	Fe-Ar A=1/2	200
(WRONG HD) (WRONG RA/DEC IN FILE)	197433 VW Cephei HD197433	20 38.6	+75 14	22 44	23 14		+75 34		1800
	Comp								200

Spectr. Temp. ..... Dome Temp./Hum. -2.7°/57% Transparency Conditions ... Semi Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				PCS RedCol	831/398	RS	6600	IA			
1900 30		≈7.5 V	G5V					IA	Hdy-pgm		
								IB			
1500 60		Halted @ 2830 to Observe				[ND 0.6 +1.2]		IA		"B" cloud obscured tube cathode	
230 18								IA		Reversal	
1600		~~7~~	~~K5~~	(Tending to guide at 290° pos'n angle) * image to lower Left of hole				IA	Hdy-pgm	Reversal	
260 20								IA			
240 70		V 7.5	G5V	(counts as high as 3800)				IA	Hdy-pgm	Centrally guided	
4 frames										Above Fiber head on monitor	
4 Crumies		V 7.81		(Note Could be a seeing test also)					Light West	Wind, Dome N N W	
1200 50		7.81 V		(counts as high as 2400)				IA	Hdy std	* Halted due to FIFO getting cloudy Failure.	
								IA			
1300 50		7.81 V						IA		clouded out Halted early	
220 15								IA		Ch "B" failed during integration	
3000 ?								IA			
								IB			

55 #2

Date 1987 Nov 18/19 Observers Hdg-Tan

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	HD 197433 VW Cep(c)	20 38.6	+75 14	23 22	23 52	0648W	+75 34		1800
	Comp					07 06W	〃	Fat Clean	300
	HD197433 (AB)	20 38.6	+75 14	23 58	00 10	~~07 06W~~ 05 W	〃		~~1800~~ ~700
SP0021.HDY	Comp (WRONG TITLE IN FILE)								200
2120.HDY	FLAT AT THRS W REVERSED			00 24		Reversal 07 06W	+75	TUNG A=1/8	
2121.HDY	DARK Lights out, shutter closed			02 40	05 40	00	platform		
2122.HDY	Flat Nov 19/20			18 33	20 33	〃	〃	TUNG A-1/8	
	DARK Wm room Light on			21 22		〃	〃		
	Flat			~~21 36~~		00	platform	TUNG A=1/8	

Spectr. Temp. ..... Dome Temp./Hum. -4.2°C..67% Transparency Conditions . PART. Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ →	P.H.	Program	Remarks	Quality
2700 80			K5	PCS Red Col	831/328	RS	6600Å	IA	guiding at upper Right of image	"B" channel Failed during Exp	
230 26		~~7.5V~~	G					IB	~~guided on LHS of image~~		
1500 60		7.5V	G5V					IA	guided at LHS of image	∴ V Vir Cephei (A B) CLOUDED OUT	
230 18								IA			
2100* 90		ND = 2.3						IA		B FAILED t ~1000 sec	
↓ 1500 60		after moving down to platform,					written	IB	back of up	SP00 2100.HDY - 2120.HDY	
1500		ND = 2.3					written	IA			
40 <10								IA			
A B 600 60		ND=2.3						IB			

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Emulsion Batches:

Date 1989 NOV 21/22... Observers KK-Tm/Tm-Hdg..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Hartmann Frames ↑	Deneb			≈ 17 55		01 05 W	+45 16	30, 60, 90 secs	
"	" refocussed to smaller image			18 00		01 10 W		60, 30, 90 secs	
"	α Aql			≈ 18 10		20 0	≈0 20	1 min	
2124	Flat while setting up			21 38	21 57		ND=23	TUNG A-1/8	
SP 0021 25 HDY	Comp #1					Reversal	no ND	Fe-Ar H=1/2	200
26	HD 197433	20 38 6	+75 14	22 06	22 36	05 46 W	+75° 33'		1800
27	Comp								200
28	HD 197433	20 38 6	+75 14	22 42	23 12	06 22 W			1800
29	Comp							Fe/Ar A-1/2	200
30	HD 199476	20 52.4	+74 23	23 18	23 48	06 46 W	+74 43		1800
31	Comp							Fe Ar A=1/2	200
32	HD 199476	20 52.4	+74 23	23 53	00 23	07 18 W			1800
33	Comp							Fe Ar A=1/2	200
2134	HD 199476	20 52.4	+74 23	00 28	00 59	07 55 W			1800
HDY	PCS failed, unable to Reload.								

Spectr. Temp. ..... Dome Temp./Hum. at 22 EST -7.7 74% Transparency Conditions . getting cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -9.0°C 75% KK visitors Lookout Jupiter, M32, M77

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		1.34	KIIa	35mm camera			2415 (Red sensitive) Film		Hartmann Mirror Figure	mask in place at end of tube setup	
							4				
		~4	CIIb				4			Cloudy attempt	
A B							λ				
1500 50				PCS Red Col	8311/39.8	RS	6600Å	IA			
170 10								IA			
100 20		V ~7.5	G5V					IB	Hdy-pgm	Field drawn → clouds out	
150 15								IA			
100 30								IB	Hdy-pgm	thin cloud no "B" channel during this exp	
160 10								IA			
660 20		V 7.81	G8V					IB	Hdy Std	A+B channel had quit [cloudier] ~ H+R1 done @ 2330	
150 10								IA			
800 25		V 7.81	G8V					IB	Hdy-std,		
140 10								IA			
500 25		V 7.81	G8V					IB	Hdy-std	some cld	
					back ref up.						

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PM#1 Wed-Thurs

Emulsion Batches: .....

Date 1989 Nov 22/23.. Observers .T.n.,...Hdg. checking + doing photometry on 24" .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2135	HDY Flat at Start			17 20	19 07 ~~18 50~~	0 0	platform	TUNG A=1/8	
	~~Flat #2~~			~~19 26~~					
36	Comp			≈ 20 25			No ND	Filter A=4.2	200
37	M32			20 32 *	20 57				
38	Comp					Reversal			200 900 ~~1800~~
2139	HD 197433 (AB)	20 38.6	+75 14	21 05	21 21	0433 W	+75 34		
2140	~~Comp~~ "	"	"	21 22	21 37	0450 W	"		900
41	Comp								200
42	HD 197433 (AB)	20 38.6	+75 14	21 44	22 04	05 17 W			1200
43	Comp								200
44	HD 199476	20 52.4	+74 23	22 09	22 39	05 36 W	+74 44		1800
45	Comp							Filter A=1/2	200
2146	HD 197433 (AB)	20 38.6	+75 14	22 45	23 00	W			900
	~~Comp~~								~~200~~

Spectr. Temp. ..... Dome Temp./Hum. -4.7°C 58% Transparency Conditions ... Clear at FIRST 60

Focus ..... Fans On + Dome shutters open @ 1715

Spectr. Temp. ..... Dome Temp./Hum. ..... B/n Tour - Lighting Eng Society Looked at M32

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1700	40	ND=2.3			PCS Rel Coll	831/39.8	RS	6600A		Hallet's Research	@ 1809 due to Tfocus lost	
		Note "Flat at Start" may have some contamination From M32									due to Halts. 5 mins night.	
									IA			
30	6								IB		* adj 12 → 5 @ 20 added to earlier Exp	
300	13								IA			
3800*	60		≈ 7.5 V	G5V	Hallet at 900 secs written				IA	Hdy-pgm	* some 7500 cnts Counts to 4800, then cloud	
2500	45		"	"					IA	"	Cloud acting as a Necessary ND Filter.	
240	20								IB			
2500			V ≈ 7.5	G5V					IA	Hdy-pgm	ch "B" cutout counts to 3500	
240	15											
1200	30		V 7.81	G8V					IA	Hdy-std	thin cloud cnts to 2600	
250	13								IB		∴ Tr quasi ~~Snow~~ closed partially	
1800									IB	Hdy-pgm		
									IA			

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#2

Emulsion Batches: .....

Date 1989 Nov 22/23 .... Observers ..TA..... (some Hdy) ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2147, Hdy	HD 197 433	20 386	+75 14	23 09	23:29	6m 42m W	+		1200
48	Comp								200
49	HD197433			23 36	23 52	7 06 W	+7533		1200
2150, HDY	Comp								200
51	Flat at End (not so now)			00 11	01 15	0 0	-20° mostly	Twg A-B	1200
52	Comp								200
53	HD197433			01 30	01 50	W	+		1200
54	"			01 50	02 10	W			1200
55	Comp								200
56	HD197433			02 15	02 35	W			1200
SP002157	~~HDcomp~~ HD197433			02 38	02 58	W			1200
	HD197433			02 59	03 19	10 32 W	+75 32		1200
	Comp								
	HD197433			03 24	03 44	10 57 W			1200
	HD197433			03 44	04 04	11 18 W			1200

#2

Spectr. Temp. ..... Dome Temp./Hum. -5.8°C 77% Transparency Conditions ... hazy to s/cloudy 62

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
1800	60				PCS Red Cdl	831/39.8°	RS	6600Å	IA	Hdg-pgm	h	
240	10								IA			
2000	50								IA	Hdg-pgm	* Ha/Hal bg clad, some cloud	
240	10								IA			
1300	30	IND-2.3							IA	*HaHal@	3920 secs. written	
230	15								IB			
1800	55								IA	Hdg-pgm	Ha Hal's Resumed to beat "A" channel clear again	
1600	50								IB	"	"B" channel cutout	
200	15								IA			
1800	50								IA	Hdg-pgm	"B" cutout cnts to 2500/sec	
1900	50								IA	"	cnts to 3200/sec	
0400	80*		counts in "A" to 3700 (Reworkable)					written	IB	"	Channel B cutout and *(to 120) High counts	
190	10								IA			
2200	70								IA	Hdg-pgm		
1900	60								IB	"		

L3pg #3

Emulsion Batches: .....

Date 1989 Nov 22/23 Observers TH .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.
	Comp						no ND	Fe Ar H=1/2	200	
	HD199476	20 52.4	+74 23	04 09	04 29	11 30 W	+74 42		1200	13:30 50
	Comp	done while unreversing					unreversed		200	14:0 15
	HD197433	20 38.6	+75 14	04 44	05 04	11 40 E	+75 33		1200	11:20 50
	"	"	"	05 05	05 25	11 20 E			1200	10:30 50
	Comp							Fe Ar H=1/2	200	8:20 20
	HD197433	20 38.6	+75 14	05 34	05 54	10 52 E			1200	7:30 40
2169	"	"	"	05 55	06 25	10 19 E			1800	8:30 35
2170	Comp								200	6:30 16
2171	Flat at DAWN			06 42		0	platform	Tung H=1/8	7200	4:30 40

Spectr. Temp. ..... Dome Temp./Hum. −8.2°C 74% Transparency Conditions .. Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. −10.3°C 74%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				PCS			6600Å	IA			
1300 50		V= 7.81	G8V					IA	Hdy pgm s tel	"B" cut at during exp	
90 15								IB			
1100 60		V ≈ 7.5	G5V					IA	Hdy-pgm		
1200 50								IA	"		
200 20								IB			
~~1000~~ 700 40	V poor							IA	Hdy pgm		
800 35	V V poor							IA	"	Both A & B clamps second	
200 16								IB		To improve throughout slightly	
400 40								IA	ND=2.3		

Date 1989 Nov. 23/24 Thurs/Fri Observers SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	M32 (2000 epoch)	00 42.7	+40°52	18h					
	M31 (")	00 42.7	+41° 16						
	M52 (")	23 24.2	+61 35	18h 51					
	M15 (")	21h 30.0	+12 10	20h					
2172	Flat	Platform		15 39	17 12				
	Jupiter			2:30					
	M42 (2000)	5h 35.4	-05 27	2:45	4:00				

Spectr. Temp. ..... Dome Temp./Hum. -7°/66% Transparency Conditions ... Clear! .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -7°/78%

→ cloud

→ clear & Lazy

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
										nice	
										OK	
										nice rich cluster	
										fds four ~ 45	
										then it clouded over	
										brilliant → shows dirt on eyepiece	
										Nice in finder.	
									then	looked for other objects, but needed finder chart	

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Date 1989 Nov 24/25 Fri/Sat Observers SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
2174	Flat	Platform		$17^h 05$				Tungs 1/8 Ap	7200
2173	Dark (Shen)			$14^h 37^m$	$16^h 37^m$				7199
2175	Flat NOV 25			$16^h 50^m$	$18^h 50^m$				7200

Spectr. Temp. ..... Dome Temp./Hum. -3°/63% Transparency Conditions Clear → Overcast

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.		Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
A	B				?	?	?					
30	1000										NOTE: B is now MAIN channel	
											B all out 4 times	
											It then clouded over	
											@ 17:45	

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Emulsion Batches: .....

Date 1989. Nov. 26/27... Observers ...SAS/MKi..... .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
SP00 2176	Flat			16:50		darkish?			
2177	Comp			19:09				FeA ½ to	200s
2178	Comp			19:58	20:02			↓	20c
2179	HD 8779	1h 21.4	−0° 55	20:22	20:33		−0° 20		30c
2180	Comp			20:37		0 40 E		½ FeA	200
SP00 2181	Comp	~~3h 44~~	~~+16 57~~	21:19				½ FeA	200
* 82	V471 Tau did wrong star	3h 44	+16 57	21:26	21:46	1h 50 E	+17 28		20min
83	Comp			21:52					
84	Flat			22:05				Tung	7200
85	Comp	~~3h 44~~	~~+16~~	22:55	22:59			½ Ap FeA	200
86	V471 Tau	3h 44	+16 57	23:02	23:22	00 20 E	+17° 15		20min
87	V471 Tau	3h 44	+16° 57	23:25	23:45				20 min
88	Comp			23:58					200s
89	V471 Tau	3h 44	+16° 57	00:04	00:24				20min
90	V471 Tau			00:25	00:45	1h 02 W			20 min

Spectr. Temp. ..... Dome Temp./Hum. +1°/68% Transparency Conditions ... Clear becoming cloudy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 0°/77%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				PCS Red coll	831/39°8	RS	6600Å	IA		Ch. B failed 2X	
								IA		wrong header	
								IA			
300 ~~200~~								IA		Sl. Rad Vel. some clouds	
~150								IA			
								IA			
~100		** DIDN'T RONG STAR **						IA		Filt dropped out 1X	
								IA		clouded out	
								IA		cutout ~~3X~~ 4X	
~150								IA			
~200	poor	9.5	Kov					IA		hazy but clear	
~275								IA			
150								IA			
275								IA		cutout 2X	
300								IA		# cutout 2X	

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Date 1989 Nov 26/27 Observers SAS/MKi

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP00 2191	Comp							AP 1/2 FeA	200S
92	V471 Tau	3h 44	16° 57	00h 54	1h 14				20 min
93	V471 Tau			01h 17	1h 37	1 54 W			20 min
94	Comp			01h 38				1/2 ap. FeA	200S
95	V471 Tau			01 45	2:05				20 min
96	V471 Tau			02 : 06	02:26	2 44 W	+17° 15		20 min
97	Comp			02 : 28				1/2 ap FeA	200S
98	V471 Tau			02 : 36	02:56	3 15 W			20 min
99	V471 Tau			02 : 58	03 : 18				20 min
SP00 2200	Comp			03 : 19				1/2 FeA	200S
01	V471 Tau			03 : 25	03 : 45				20 min
02	Comp			03 : 47	03 : 51				200 S
03	Flat			Platform Start		4:53		1/16 Tung	2 hrs

Nov 27/28 Eds/SAS Echelle+Ratican

Flexure Tests → 4@ comp. each → 12@ +60 dec, 14@ +40 dec, 13@ +20 de

Spectr. Temp. ..... Dome Temp./Hum. ...0°/.81.%. Transparency Conditions ..hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
150				PCS				IA			
250		9.5	KoV					IA		Cutout 1x	
250								IA		" " 2x	
130								IA			
A/B 13/300		9.5	KoV					IA			
13/325								IA		3X cutout	
8/130								IA			
10/300		9.5	KOV					IA		Cutout 2X	
10/275								IA		" Ø	
8/130								IA			
8/230		9.5	KOV					IA		Ø cutout	
8/130								IA			
50/1800	ND=1.2							IA			
10 @ 0° dec.											

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Date 1989 Nov 28/29 Wed/Wed Observers Fds/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0	Printed Flat								
1	Flat								
2	Comp							Th-Ar	20s
3	6Per HD22928	03h35.8	+47 28	20 46	21 37	1 50 E			
4	Comp								
5-8	Flats 4@ 13sec	730, 722, 714, 711							
9	Flat								
10	Comp								20s
11	6Per HD22928	03h 35.8	+47 28	02h09	03 26	0400W	+47 49.		
12	Comp								
13-16	Flats @ 22s	1223, 1188, 1170, 1160							

Spectr. Temp. ..... Dome Temp./Hum. 3°/53% Transparency Conditions .. Var. cloud .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -10°/66% @ 2:00

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle Reticon	18.65	H 400 W105	4481 Å XHRAT●	127	Fcs program	Topped dewar @ 19:45	
										slit width .253	
"										Dewar HA = 2.5°	3603
1890	~~1.5~~	V 30 ~~[illegible]~~	B5III							Bad Picket Fence.	776
											3606
										Topped up 1:40	
											3897
5000	BAD								t = +0.229	Horrible Picket Fence.	1260
											4023

75 pg #1 Thurs–Fri

Date Nov. 30/Dec. 1/89. Observers . F.ds.-. SAS. .-T.n.....

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Min
0	Prompted Flat ~~DeltaPer~~			≈ 17 24		E		~~ThA~~	20secs	
1	Comp at DeltaPer posn							Th A	10sec	
2	HD22928 DeltaPer	03 35·8	+47 28	17 34	18 24	04 56E	+4747			6500
3	Comp			~~18 27~~				Th A	20 sec	
4	HD22928 δPer			18:27	19:17	04 04E				4500
5	comp								20s	
6	HD22928 δPer			19:19	19:47	03 33E				2700
7	comp								20	
	4 flats @ 20s	1011, 990, 961, 951								
	4 flats @ 35	1620, 1591, 1565, 1573.								
16	DARK (Noise Tests, Dark Slide open)			20 11	21 26	DRIVE OFF 03 40E	+4747	(Gen off)		Remicloy
17	"			21 27	21 42	"	"			
	IKS			~~21 44~~						
18	comp	wider slit -150μ.						Th-Ar	20sec	
19	HD22928	03 35·8	+47 28	2203	2233					3000

Spectr. Temp. ..... Dome Temp./Hum. -4.3°C ..... 56% Transparency Conditions . P.C.R.T. . cloudy .....

Focus ..... Dome opened = Slit width set = .253

Spectr. Temp. ..... Dome Temp./Hum. ..... Fans on by 17:10 Dewar T. 11 = +215°

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion λ	~~P.H.~~ ORDER	Program	Remarks	Quality
				echelle Ref	18.65	H=400 μm W=105 μm	4481 Å	127	Fds-pgm	Dewar Topped @ 1720	~~936~~ ~~1846~~
											1846
4000		V 3.00	B5III						4 Pt.	T=+0.213 @ 1745	1521
											3707
4500									4 PT.	Dome T=-5.5°C T=+0.219 @ 19 EST	1630
											3844
2706									No 4 PT.	T=+0.221 / Dome T=-6.1	952
											3770
Dome closed) (Reg 4 lat house lights on)						H=400 150 μm	Comp mode'			4 pt observed, Slit widened to 150 μm	40
										(Raw looks OK) T=+0.219	22
				echelle Ref	18.65	H=400 150 μm	4481 Å	127	Fds-pgm	T=+0.219 Dome T=-7.2	
3000		V 3.00	B3III							T=+.223 Dome T=-8.0	1012

77 pg 42

Thurs/Fri

Date 1989 Nov. 30/Dec 1 Observers Fds/SAS/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Comp							Tr A	20s
	4 Flats @ 15 sec	1082, 1082, 1071, 1079							
25	Dark			2240	2303				
26	DARK			2304	0005				
	DARK			0009	0014				
	DARK			0015	0116				
	comp							Tr-A	20
	HD22928 5Pec	03 35.8	+47 28	0120	0158	02 18 W	+47 49		
	Comp							Tr-A	20
	4 Flats @ 7s	484, 484, 487, 478							

pg#2

Spectr. Temp. ..... Dome Temp./Hum. ~8°/67%. Transparency Conditions .. Variable Cloud 78

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ ?	P.H. crdn	Program	Remarks	Quality
				Echelle/Ret.	18.65	H=400μm W=105μm	4481 Å	127	Fds Program	Dewar T: 11 2.5° Slit width = .253	3654
Dome T=-6.9				(Inverse 4pt pattern? - Relevel after 1st this time)						Dome closed Topped up @ 22:50	
Dome T=-6.9°C,	Still closed,			(Inverse 4pt pattern)				4	4 4		
" -6.6°C	"	"								not saved (clean)	26
				no 4pt seen						clean.	25
											3422
1570		V= 3.00	B5III	echelle Ret	18.65	W=150μm	4481Å	127	Fds-pgm	Dome T=-9.7 @ 01 30 T=+0.219 @ 01:30 ↳ 4pt	415
											1899

79 Fri - Sat note A & B channels Reversed from previous practice

Emulsion Batches: .....

Date 1989 Dec 1/2 ..... Observers T.A. - SAS .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Flat			17 46	18 46		ND=06	TUNG A-1/4	3600
	Fe-Ar Comp - long			18 52			No ND	Fe Ar A=1/4	600
	Comp [for Reg Observing]						"	Fe Ar A=1/4	200sec
	BD+284211	21 46.7	+28 24	19 58	20 58	03 34W	+29 52		3600
	Comp					"	"	Fe-Ar A-1/4	200sec
	HD 23169	03 37.9	+25 25	21 17	21 38		+		~~3600~~
	Comp								200sec
	Flat			21 50	22 50				
	Note - Dec 2/3		2 Flats	written in anticipation of Observing that didn't materialize.					

Spectr. Temp. ..... Dome Temp./Hum. -8°C : 55% Transparency Conditions Clear → hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Fans on + Dome opened @ 1645

SHS Tour before observing

Exp. Mtr. B / A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
2050 80				PCS Red Coll	431 l/mm 150 l/mm	RS	4300Å	IA			
290 15								IA		Echelle Top up @ 1950	
280 18								IA		Fans on again @ 1950	
90 8	POOR	9.5	sd 0					IA	Sp. phot std	Cloud at end SI hazy Fld Drown	
300 15	~~poor~~							IB			
300 20	* very poor	8.75	62 V	Half-Tw cloudy				IA	STD vel	* Rapid Temp drop -10.6 @ 2117 cloud	
300/ 20								IA		Field checks with α CrT 75 Book drowning in Fld ~~Book~~	
1900/ 70								IA		Ret top up @ 00:10	

81 pg 41

Sun - mon

Date Dec. 3/4/89 Observers Eds - Tom

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
1	Prompted Flat			17:26		2 06 E	+47°47'	Tung Halide	20sec
2	Comp							Th-Ar	15s
3	HD22928 DeHaPeR	03 35.8	+47 28	17 40	18 27	04 44 E	+47°46		5
4	comp								25s
5	HD 22928 sPer	03 35.8	+47 28	18 28	19:13	03 58E			
6	comp								20s
7	HD 22928 sPer	03 35.8	+47 28	19:15	19:57	03 14E			
8	comp								20
9	HD 22928 sPer	03 35.8	+47 28	19:59	20:47	02 24E			
10	comp								20
11	HD 22928 sPer	03 35.8	+47 28	20:49	21:31	01 37E	+47°47		
12	comp								20
13	HD 22928 sPer	03 35.8	+47 28	21:33	22:21	00 47 E			
14	comp								20
15	comp								15
16	HD 22928	03 35.8	+47 28	22:30	23:10	0002W			

pg #1 Dec 3/4

Spectr. Temp. ..... Dome Temp./Hum. -10.8°c / 56% Transparency Conditions . Fine .....

Focus .....

Dome panel: 1 FAN on @ 17EST

Spectr. Temp. ..... Dome Temp./Hum. .....

Dewar topupe 17EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion λ	~~P.H.~~ ORDER	Program	Remarks	Quality
				Echelle Retico	18.65	400 M 150 W	60, 448	127		Dewar TILT +2.5°	1623
											2650
5006		V= 3.00	B5III	4 pt Nose obvious					Fds-pgm	DOME T @ 18:10 = -16.4° T = +0.241	2140
											3505
5002		3.00	B5III	No obvious			4pt.		"	Dome T = -11.6 @ 19:13	1939
											3457
5006		3.00	B5III	No obvious			4pt.		"	DOME T @ 19 40 = -12.1°C Dewar T = +0.242	1685
											3631
6009		3.00	B5III	"	"		"		"		1999
											3578
6600		3.00	B5III	Weak 4 point.					"	DOME T @ 21 EST = -13.5°C Dewar T = 10.243 [2nd Fan turned on @ 21:00 EST]	2034
											3311
6505		3.00	B5III	"	"				"	T = -14.1 @ 21:36 Dome turned from East To N. East from NNW	2157
										Top up @ 22:25 T: +0.247	3644
										@ 23 30 Dome T: -15°C Dome Turned to NW	2646
7650		3.00	B5III						"		2460

83 Pg 42

Sun - Mon

Date Dec. 3/4/89 Observers Fds-Tm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
17	comp								20
18	HD 22928	03 35.8	+47 28	23:12	23:52	00 44W			
19	comp								20
20	HD 22928	03 35.8	+47 28	23:55	00:35	01 27W	+47 475		
21	comp								20
22	HD 22928	03 35.8	+47 28	00:37	01:23	02 15W			
23	comp								20
24	HD 22928	03 35.8	+47 28	01:25	02:10	03 03W			
25	comp								20
26	HD 22928	03 35.8	+47 28	02:13	02:53	03 46W			
27	comp								20
28	HD 22928	03 35.8	+47 28	02 55	03:38	04 31W			
29	comp								20
30	comp								20
31	HD 22928	03 35.8	+47 28	03:46	04:26	04 19W	+47 47		
32	comp								20

pg#2 Dec 3/4

Spectr. Temp. ..... Dome Temp./Hum. 7.5c ..... +60% Transparency Conditions . fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion λ	~~P.H.~~ offset	Program	Remarks	Quality
					1865	150	600, 4481Å	127			3634
8257		V= 3·0	BS III		very	weak	4pt	visible	Fds - lpv		2459
											3867
8011		3·0	BS III		"	"	"	"	"	at midnight Dome T = -15.7°C Dome facing NW	2161
											3908
7005		3·0	BS III		"	"	"	"	"	@ 01 EST Dome T = -16.5°C some cloud	1808
											3921
5703		3·0	BS III		"	"	"	"	"		1503
											3922
7005		3·0	BS III		4pt	visible			"	Dome T @ 02 30 = -16.9°C	1796
											4037
6004		3·0	BS III		No	4pt.	visible		"	clouds lost 1/2	1472
					top up						3826
											3747
6029		3·0	BS III						"	Dome T @ 04:20 = -17.2°C clouds lost 1/2	1461
											3822

85 pg# 3

Emulsion Batches:

Date Dec. 3/4. 1984 Observers F.L. - T.G.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
33	COMP								20
34	HD 87901 αLeo	10 03.1	+12 27	04 37	04 50	0 42E			
35	comp								20
36	comp								20
37	HD 120315 γUMa	13 43.5	+49 49	05 08	05 34	03 38E			
38	comp								20
39-42	4 flats @ 19s	1484, 1451, 1437, 1530							
43-46	4 flats @ 23s	1738, 1739, 1726, 1715							
47-49	3 flats @ 29s	2189, 2172, 2174							
50-53	4 flats @ 34s	2541, 2529, 2533, 2571							
54,55	2 flats @ 38s	2874, 2862							
56,57	2 flats @ 58s	4297, 4288							

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Part. cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... -16.9°C H=65% Dome

Shutters closed 0545

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20											3552
10000		1.86	B7V		weak 4pt				Feis-Rod		2837
20											3494
20											3529
10012		1.84	B3V		No 4pt visible				"		4183
20											3379

87 pg#1 Thurs/Fri

Date 1989 Dec 7/8 Observers Jn. SHK

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
18	Flat } previous night								
19	Flat }								
20	DARK 3hrs (previous night to morning)								
21	Flat (hung up after a 33 70 sess) 2hrs			17 13 interval	~18 10		MD filter ?	Tung A=1/8	
22	Flat (Hu/Hel due to clearing)			19 25	20 13	Hu/Hel @	2800 secs	Tung A=1/8	
23	Comp #1			20 16				Fe Ar A=1/2	300
24	HD ABAUR	04 49.4	+30 23	20 25	20 55	03 10 E			1800
25	Comp							Fe Ar A=1/2	300s
26	AB AUR	04 49.4	+30 23	21 07	21 31	02 34 E	+30 35		
27	Comp								300
28	Flat during cloudy stretch			21 50		Hu/Hel e	* 4370.8 secs		
~~28~~	~~Comp~~			~~23 35~~					300
29	Comp (after uploading)			23 46				FeAr A=1/4	300
2230 ~~Hati~~	AB AUR	04 49.4	+30 23	23 51	00 21	00 16 W			1800
31	Comp							FeAr A=1/4	300

Spectr. Temp. ..... Dome Temp./Hum. @20 EST −8.8C 69:73 Transparency Conditions .. Clearing .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Cloudy stretches. Fans 1st one done open @ 16:50

Reopened shutters & Turned fans on @ 19:50

Exp. Mtr. B	Exp. Mtr. A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Δ	~~P.H.~~ Buffer	Program	Remarks	Quality
					PCS Red Cd	831/40.1	RS	6700Å		Note OG550 filter inserted by KK presumably in front of RS.		
											Top up @ ~20 EST Ha for still off Reticon	
500	24	ND= (same as previous) (ie 2.0+0.3)							IA			
250	18								IA			
200	25		7.01	BG	[Note Hα Region getting ≈ 4→5 counts per sec]				IA	SHK pgm	counts to 3200/sec	
140	13								IA		ABAUR Field drawn	
500					With ND=0.6 written OK				IA	SHK pgm	then cloud ∴ Halted	
240	20								IA			
1500	25								IA	[Note * A & B f.f.o lights noticed lit up @ 23:14. Ithad been OK @ 23 EST]		
PCS		failed, hung up completely							IA			
220	15	∴ Uploaded & Reset etc.							IA			
500	30								IA	SHK pgm		
220	15								IA			

89 pg #2

Date Dec. 7/8/89 Observers TG

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
32	Flat			00 35	01 35			Tung A=1/8	3600
	DARK 3 Hrs - while closing			~0200 at start.	0500 (Ignore header Times/date)				

Spectr.
Focus
Spectr.

Spectr. Temp. ..... Dome Temp./Hum. -9.9C 75% Transparency Conditions .. Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -9.3 ..... 744 @ 02EST Shutters closed at 00:30 → (note logtemp plot for 1450 gain to close)

Channel Exp. Mtr. B A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1360 28	ND=20	+0.3		PCS Red Col	831/401	RS		I/I		written	
Note This Flat int completed normally, but green FIFO light remained on after int finished.											
			~~Co-offs~~		831/401	RS		I/I	~~ignore~~ written next night		

91pg #L

Fri-Sat

Date 1.9.89. Dec. 8/9.... Observers ...T.H./M.K.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Fe-Ar							Fe-Ar A=1/2	300
2235	HD 179929	02 01.5	+22 59	19 20	19 32	01 30E	+23 23		1200
SP00236.mki	Fe-Ar	ic (Center shifted (Blue)						? should have, problem?	300
31	Fe-Ar	[Note: this comp shifted blue of previous slightly due to getting out of Controll]							300
38	V 471 TAU	03 44.7	+16 57	20 02	20 22	0233E	+		1200
39	V471 Tau			20:23	20 43				1200
40	Fe-Ar.			20 45					300
41	V471 Tau			20 51	21 11				1200
42	V 471 TAU			21 12	21 32	01 23E	+17 14		1200
43	Fe-Ar								300
44	V 471 TAU			21 39	21 59				1200
45	V471 Tau			22 03	22 24				
46	Fe-Ar								200
2247	V471 TAU			2230	2251	00 04E			1200
48	Fe-V471 TAU			22 55	23 15				1200
49	Fe-Ar								300

Pg # 1

Spectr. Temp. ..... Dome Temp./Hum. -6.9°C H:66% Transparency Conditions Clearing

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Dome open & Fans on by 17 EST

Exp. Mtr. B	Exp. Mtr. A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					RedCd	1800/630°	RS	6650Å	IA		written (Star in "B" channel)	
1200	20		V 7.8	K2III					IA	stdvel	691 secs Fld checks with Oct 29 Fldd	
190	10								IA			
160	15		(shift prob from RE setting same angle)						IA	Repeat (increase grating moved when -		
200	8		9.5	K0V					IA	mix pgm		
									IA			
									4			
									4			
200	8								4			
160	10								11			
900	15								4			
									7			
140	9								11			
200	8								7			
230	10								4		counts to 270/sec	
									11			

93 Dec 02

Emulsion Batches:

Date 1989 Dec 8/9 Observers MKI-TA

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2250.MKN	V 471 TAU	03 44.7	+16 57	23 25	23 45	00 50W	+17 14.5		1200s
51	"			23 47	00 07	W			1200s
52	Fe AR Comp							Fe/Ar A-1/2	200
53	V 471 TAU	03 44.7	+16 57	00 14	00 35	W			1200
54	"	"	"	00 35	00 55	W			1200
2255	Comp								
2256	V 471 TAU	03 44.7	+16 57	01 02	01 22	W			1200
	"	"	"	01 26	01 46	02 49 W	+17 14.5		1200
	Comp								
	V 471 TAU	03 44.7	+16 57	01 54	02:14	W			1200
	"			02:17	02:37				1200
	comp								
	V 471 TAU	03 44.7	+16 57	02 47	03 07	04 MW			1200
	" "	"	"	03 08					
	Comp								200

Spectr. Temp. ..... Dome Temp./Hum. −8.4°C 75% Transparency Conditions O.K. ... v. s/hazy .....
@ ~ 2330
Focus .....
Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ ?	P.H. Buffer	Program	Remarks	Quality
230 10				PCS Rel Coll	1800/63°	RS	6650Å	IA	Mk-pym		
230 10								IA			
140 13								IA			
~~2~~40 10								IA			
230 8								IA			
								IA			
260 10								IA			
250 8								IA		Dome T = −8.1°C * Humidity = 69.3%	
								IA			
250 10								IA			
								IA			
								IA			
220 8								IA			
210 8								IA			
								IA			

95 Pg #3

Emulsion Batches: .....

Date 1989 Dec 8/9 .... Observers Mk. Tq. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr
	V 471 TAU	03 44.7	+16 57	03 40	04 00	05 04 W	+17 13		1200	* 330 15
	"	"	"	04 03	04 23	05 27 W			1200	250
	Comp							Fe Ar A=1/2	200	140
	V471 TAU	03 44.7	+16 57	04 29	04 49	05 55 W			1200	220
	Comp								200	
	BM Cass	00 48.6	+63 33	05 03	05 23	09 24 W			1200	360
	Comp							Fe Ar A=1/2	300	100
	BM Cass	00 48.6	+63 33	05 32	05 52	0953 W	+64 01		1200	230
	Comp								300	
	HD 112299	12 50.6	+26 16	0607	06 27	01 33 E	+25 49		1200	330
	Comp								300	
	HD 86801	09 55.8	+29 02	06 35	06 49	W	+28 37		1200	330
	HD 86801	09 55.8	+29 02	06 51	06 56	01 51 W	+28 38		300	450
2278 mtn	Comp							Fe Ar A=1/2	300	150
2279 mtn	Flat (on timer)			07 20	09 20		(ND=2.0+0.3)	TuNG A=1/4	9200	204

Spectr. Temp. ..... Dome Temp./Hum. -8°C 66% Transparency Conditions ... Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -8.0 65% Note* = 70% increase in signal upon Reversing Telescope.

Exp. Mtr. B / A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
* 330 15		~9.5	KOV	PCS Rel Gl	1800/63°	RS	6650	IA	Multi-pgm	Reversal *	
260								IA			
110 6								IA			
220 10								IA			
								IA			
300 10								IA		Dome T = -7.7°C H = 64%	
100 10								IA			
230 12								IA	odd	Look for in Reduction feature Red of Hα ?	
								IA			
730 18		v 8.66	F8V					IA	std vel	Fld drawn check it	
								IA			
* v 780 20		* v 8.88	* G0V	* Probably wrong star.				IA	std vel	Fld drawn check it	
450 15		"	"	prob correct star				IA	std vel	North of previous exp	
150 11								IA			
2004								IA	written next night @ 1738		

97

SAT-SUN

Date 1989 Dec 9/10 Observers T.M./Steve Chan

Emulsion Batches:

AST clock reset to Runshaw to match Astra clock ~~-1 hr~~ ≈1745

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2280mki	FLAT at START Dec 9/10/89			17 39	1813	Halted	ND 2.0+0.3	TUNG H=1/4	
2281	Comp			18 16			no ND	Fe Ar H=1/2	20s
2282	V471 TAU	03447	+16 57	18 27	1837	04 16 E	+17 15	Halted	~~1000~~ 840
2283	Comp							Fe Ar A=1/2	200s
	~~Sky - Cloudy~~ ~~Moon Lit ~3/4 moon~~			1902		E —			
2284	SKY, Cloudy, 3/4 moon			1902	≈2058	00 35 E	-23°	Halted	~~100 sec~~
2285	Comp							~~TUNG~~ Fe AR	
2286	V471 TAU	03447	+16 57	2100	2123	01 30 E			1800
2287	Comp								200
~~2288~~	~~Sky - 20 secs N of V471 TAU~~								
2288	V471 TAU + Cloud			2148	2158		Halted		60
2289	Comp								200
2290	4 hr DARK done into the morning of Dec 10								

Spectr. Focus Spectr. Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. @1740 Dome shut closed -5.0 74% Transparency Conditions Partcloudy-Verycloudy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -5.6 85% @19EST

Exp. Mtr. B	Exp. Mtr. A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2280	35				PCS Rod Coll	1800/6300	RS	6650Å	IA		Halted to Observe	
140	10								IA			
100	8		(Moon ≈ 35° west of object)						IA	mki.pgm	thin cloud/ Then thick cloud	
160	8								IA			
		Note, SP002287 written before Halting. Any problems? Halt was intended, but sometimes kolyhood doesn't respond. Backed up TO SP002283.mki										
25	8		.	(≈ 40° SW of moon)					IA		written,	
									IA		written	
90			≈9.5 V	KOV	(Halted @ 1330 secs)				IA	mki.pgm	Thin cloud	
140	12								IA			
									IA			
150									IA			
150	14								IA		too cloudy again	
					Backed up to end 2289.mkI							

'99

Sun-mon

Date 1989 Dec 10/11 Observers Jm

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
2291	FLAT			19 00	21 00	0 0	platform	TUNG H=1/4	7200sec
	A test			21 58 40					
	B								
	~~C~~								
	C								
2292	DARK - No Lights on at All			22 10	01 34	0 0	platform	200 mins	
2293	Flat			01 50	03 50	n	n	TUNG H=1/4	7200

Spectr.
Focus
Spectr.

Exp. Mir
B A

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. B A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2400	[ND	2.0+0.3]		PCS Red Cal	1800/63	RS	6650Å	IA	Note: After 7200 sec int finished, the "B" channel		
									F:FO light (green) remained "on." Usually, it goes out. Is this Relevant?		
240 160	(per min)		gated	no lights on in Warm Room nor on Ops floor.							
490 440	(per min)		"	light full in warm room (main lights above desks)							
~~1110 1080~~	in 2nd min Totals 1026 & 947								∴ Light on ≈ doubles dark count for B		
~~3090~~				~~20~~					∴ Light on ≈ triples dark cat for A		
250 170	(per min)		gated	Repeat of A test (light off)							
235 168	per min		"	"	"	"	"	"			
Accumulated cats B=39,700/A=34,680								IA			
2400 45	[ND 2.0+0.3]							IA	on Timer, when 0011 6pm (Peak on Plot ≈ 6K Level)		

99#1 Mon-Tues

Date 1989 Dec 11/12 Observers T.n./Ady

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
94	Comp after	focus steps						FeHP A=1/2	200
95	V471 TAU	03 44.7	+16 57	19 43	20 43	E	+17 16		3600
96	Comp							FeAr A=1/2	200
2297	V471 TAU	03 44.7	+16 57	20 54	21 24	01 20 E			1800
2298	Comp							FeAr A=1/2	
99	Comp	at New δ					Reversal	FeAr A=1/2	200
2300	HD 197433	20 38.6	+75 14	22 18	22 28	W	+75 32		600
01	HD 197433			22 30	22 40				600
02	HD 197 433			22 41	22 51				600
03	Comp			22 52	22 55.5				200
04	HD 197 433			22 56	23 06				600
05	HD 197 433			23 07	23 17				600
06	HD 197 433			23 18	23 28				600
07	Comp			23 28.5	23 32				200
08	HD 197 433			23 33	23 43				600

Spectr. Temp. ..... Dome Temp./Hum. ~8.5 ... 72% Transparency Conditions .. Hazy .....

Focus ..... ≈ Full moon

Spectr. Temp. ..... Dome Temp./Hum. ..... * seeing seems poor, but signal should be higher?

Exp. Mtr. B	Exp. Mtr. A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
135	10		V		PCS Red Coll	1800/6300	RS	6650Å	IA			
80	8	*	≈9.5	KOI					IA	mki-pgm	FULL Moon ≈ 04 40 RA +27°	
140	8								IA			
65	8								IA	mki pgm	○ ≈ 25° NE of star	
140	10								IA		writing	
					PCS Red Coll	1800/5250	RS	5200Å	IA			
600	8	poor	V* ~7.5	:	"	"		"	IA	Hdy-pgm	* variable 7.3 - 7.7 V	
500	9											
600	10											
200	5											
550	10											
650	12											
600	15											
200	8											
100 -700	15											

Note backed up To sp0002298.mki

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Date 1989 Dec 11/12 Observers T.T./Hdy

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	HD 197433	20 38.6	+75 14	23 45	23 55				600
	HD197433			23 56	00 06	08 35 W			600
	Comp							Fe Ar A=1/2	200
	HD197433	(* Previous Comp may not be right)		00 23	00 33	W	+75 32		600
	Comp							Fe Ar A=1/2	200
	Comp							"	200
	HD197433	20 38.6	+75 14	00 45	00 55	W			600
	"			00 56	01 06	09 35 W			600
	"			01 08	01 18	W			600
	Comp								
	HD197433	20 38.6	+75 14	01 26	01 36	W			600
	"	"	"	01 37	01 47	W			600
	"	"	"	01 51	02 01	10 30 W			600
2323	Comp								200
	HD 199476	20 52.4	+74 23	02 12	02 42	10 57 W			1800
	Comp								200

Spectr. Temp. ..... Dome Temp./Hum. -11°C 79% Transparency Conditions ... OK - s/cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. B A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
			G5 + KO		1800/5205	RS	3 5090Å	IA			
600 10			"		"			IA			
170 5			"		"			IA			
500 10	Center s/	BLUE	of previous exp's		1800/5203		5040Å	IA	Note changed to change grating angle - no luck!		
	"	"	"	"	"	"	5040Å	I Should	have done another "before" comp but check		
	Changed center to Red (ca. na)				1800/5207		5120Å	IA	New grating angle now	Comp in.	
300 11					"		5120Å	IA			
800 18					"		"	IA			
650 15								IA			
								IA			
800 20								IA	Hdg - pgm	cnts to 1100/sec	
900 22								IA			
750 12								IA			
								IA			
670 13			G8 II					IA			
170 7								IA			

105 pg#3

Date 1989 Dec 11/12 Observers Holy-Tay

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	HD 199492			02 48	02 51	11 07W	+74 42		
	Comp							FeAr A=1/2	200
	HD147433	20 38.6	+75 14	03 00	03:13→03:17	11 47W			600
	Comp			03 27		12 E		FeAr A=1/2	200
	HD197433	20 38.6	+75 14	03 38	03 48	11 42E			600
2331	"	"	"	03 49	03 59	E			600
	"	"	"	04 04	04 14	E			600
	Comp								200
	HD197433	20 38.6	+75 14	04 20	04 30	E			600
	HD 197433			04 31.5	04 41.5				600
	HD 197433			04 42	04 52				600
	Comp			04 53					200
	HD 197433			04 57	05 07				600
	HD 197433			05 08	05 18				600

Spectr. Temp. ..... Dome Temp./Hum. -10°F / 80% Transparency Conditions ... 5/ Hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

~~Exp. Mtr.~~ R	A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
200	20				PCS	1800/52.7	RS	5120?	IA			
									IA			
~~700~~	12			Go by logbook begins and times.					IA		*FIFO Lights allows int to tell it's self at 260 seq we restarted with 340 seq int in IA	
		Note previous exp bombed a 2nd time,										
200	10	Fe Ar signal up somewhat by going from 12 W To 12 East										
600	17							5120 A	IA	Hdg pgm		
600	15								IA	"		
600	10								IA	"		
									IA			
700	15								IA	Hdg-pgm		
550	10											
700	12											
240	9											
950	20											
800	13											

107 Pg #4

Date 1989 Dec 11/12 Observers Hdy-Tay

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	HD 197433			05 21	05 31				600
	Comp			05 32					200
2342	HD 197433			05 36	05 46				600
2343	Comp							Fe Ar A-1/2	200
2344	FLAT on Timer		3 hrs	06 22			ND 2.0+0.3	TuNG	
	Dec 12/13/89								
2345.mki	FLAT for previous night			18 55	20 55		ND 2.0+0.3	TuNG A=1/4	7200
	Too cloudy any way.								
46	FLAT for new sp Range			23 00		0 0	NO ND	TuNG A=1/16	7200
47	Comp			1:35				~~FeNe~~ A-1/2	300
48	Dark 3hrs started								

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ~12° 80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
1000 18					1800/527	RS	5120Å	IA			
220 9											
1000 20											
230 8										Closed in Fast	
2000 30								IA	written @ 0106 PM Dec 12		
					Signal too low; Flat must have failed early in integration						
2000 30					1800/527	RS	5120Å	IA	Repeat Flat attempt.		
Note. This Flat ~~stopped~~ FIFO CH "B" only stopped (no FIFO Light) @ 4570sec approx I Halfdec did "RI" to continue this integration											
1130 25				PCS RedColl	1800/45.2°	RS	3950Å	IA	Test for TANG (student)		
230 10				PCS Redcoll	1800/45.2°	RS	3950Å	IA		written	
				"	"	"	"	IA		written	

109 Pg#1

Emulsion Batches: .....

Date 1.1.89. Dec. 13/14.. Observers .T.q.....Hd.yan.24"... .....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2349	Comp							FeAr A=1/4	200
50	HD192889	20 12.2	+75 57	18 14	18 44	Reversed 03 47 W	+76 14		1800
51	Comp								200
52	HD 197433	20 38.6	+75 14	18 53	19 03	03 40 W	+75 34		600
53	"	"	"	19 04	19 14	03 51 W			600
54	"	"	"	19 15	19 25	04 02 W			600
55	"	"	"	19 26	19 36	04 13 W			600
56	Comp							FeAr A=1/4	200
57	HD 197433	20 38.6	+75 14	19 42	19 42	04 18 W			600
58	"	"	"	19 53	20 03	04 39 W			600
59	"	"	"	20 04	20 14	04 50 W			600
2360	Comp	[illegible]		20 15					200
61	HD 197433	[illegible]		20 19.5	20 29.5				600
62	HD 197433			20 30.5	20 40.5				600
63	HD 197433			20 41	20 51				600
64	HD 197433			20 52	21 02				600

Spectr. Temp. ..... Dome Temp./Hum. −12°C 63% Transparency Conditions ... Clear (so far) .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Funs & Dome opened @ 17:05

Exp. Mtr. B	Exp. Mtr. A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	P.H.	Program	Remarks	Quality
335	10				PCS Red Coll	1800/52.7°	RS	* Actual 5120Å	IA		* CONTROLL pgm listed λ for 52.7° of 1800 grid = 5163Å	
400	15	OK	8.1	G5					IA	Hdy-std	Cnts to 750/sec clouding in	
200	6								IA			
800	20	OK	~8	G5 +KO					IA	Hdy pgm	some cloud too eclipse @ 19:04 [cnts to 1300]	
900	20								IA		Dome T = −13°C	
1000	20								IA			
850	15								IA			
210	6								IA			
800	15		~7.7	G5 +KO					IA	Hdy-pgm		
856	20								IA			
1006	25								IA		Dome T = −13.4°C	
300–900	10										BAD GUIDING	
800	20											
400–1900	20										BAD GUIDING UP TO 1900	
1100	25											

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pg #2

Emulsion Batches:

Date 1989 Dec 13/14 Observers TH

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2365	Long Comp ?2	A hand up	All Fito	2104 Lights on	2112 channel B				?? 600s
66	HD 197433			2113	2123	06 00W			600
67	HD197433			21 26	21 36	06 13W			600
68	HD197433			21 37	21 47	06 24 W			600
69	Comp							FeAr A=1/2	200
70	HD197433	20 38.6	+75 14	21 55	2205	W			600
71	"	"	"	2208	2218	W			600
72	"	"	"	2220.5	2230.5	W	+7532		600
73	"	"	"	2231.5	2241.5	07 20W			600
74	Comp								200
75	HD197433	20 38.6	+75 14	2247.7	2257.7	W			600
76	"	"	"	2259.4	2309.4	W			600
77	"	"	"	2302	2312	W			600
78	Comp								200
79	HD97433	20 38.6	+75 14	2329	2339	08 18W			600

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. thin cloud .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

** Signal up dispite cloud and greater air mass seeing, nothing special either?

Exp. Mtr. B	Exp. Mtr. A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
230	7					1800/5207	RS	5120Å	IA			
1800 **	30								IA	Hdg-pgm	T = -13.6°C dome	
1600	30								IA	** very high signal after previous comp	counts to 2200	
1600	30								IA	FIFO Trouble ??		
200	13								IA		[close to MAX brightness boundary]	
1400	25								JA		cnts to 1900/sec	
1000	20								IA			
1200	20								IA	Hdg-pgm	PERIOD: 03:20 min	
1000	20								JA		min @ 22:23 secs Hdg MIN	
180	10								IA		Dome T = -14.2	
1000	20								IA			
1000	20								IA		cnts to 1400/sec	
1000	25								IH			
190	8								IA			
1100	25								IH			

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Date 1984 Dec 13/14 Observers J.G

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2380	HD197433	20 38·6	+75 14	23 42·0	23 52	W	+75 32		600
81	"	"	"	23 53	00 03	08 42W			600
82	Comp								200
83	HD197433	20 38·6	+75 14	00 10·5	00 20·5	W			600
84	"	"	"	00 23·0	00 33·0	W			600
85	"	"	"	00 34·0	00 44·0	W			600
2386	Comp								200
	HD197433	20 38·6	+75 14	00 51·0	01 01	W			600
	"	"	"	01 04·0	01 14	W			600
	"	"	"	01 15·5	01 25·5	10 03W			600
	Comp						F	Fe Ar A=1/2	200
	HD197433	20 38·6	+75 14	01 34·0	01 44	10 21W			600
	"	"	"	01 46·0	01 56·0	10 33W			600
	"	"	"	01 58·5	02 08·5	10 46W			600
	"	"	"	02 10·0	02 20·0	10 59W			600
2395	Comp							Fe AR	200

Spectr. Temp. ..... Dome Temp./Hum. -14°C / 60% Transparency Conditions ... OK .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. B	Exp. Mtr. A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ a	P.H.	Program	Remarks	Quality
900	20		3 7.5	G5+ KO	PCS RedCol	1800/52.7	RS	5120Å	IA	Hdg-pgm		
800	15								IA		@ MAX?	
180									IA			
750	15								IA			
850	22								IA			
850	22								IA			
170	10								IA			
800	20								IA			
800	15								IA		Dome T=-14.7	
650	12								IA		(30th frame) of HD 17433	
160	15								IA			
750	15								IA		MIN @ 0144	
450	15	poor							IA			
500	15								IA			
700	17								IA		Dome T=-15°C	
									IA			

115 pg#4

Emulsion Batches:

Date 1989 Dec 13/14 Observers Tq

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	HD197433	20 38·6	+75 14	02 33·5	02 43·5				600
	〃	〃	〃	02 44·5	02 54·5				〃
	〃	〃	〃	02 55·0	03 05·0	11 42W			〃
2399	Comp						I STILL Reversed	Fe-Ar 4-42	200
	HD197433	20 38·6	+75 14	03 10·0	03 20·0	11 57W	+75 32		600
	〃	〃	〃	03 20·4	03 30·2	11 52E			600
2402	Comp								200
2403	Flat Lamp	On timer		03 51		00	platform		10,800
						aperture?	filter?		
					Note - probably	A-V4	ND=20	+0.3	
					Almost certainly	Tq	Dec 20/89		

Spectr.
Focus
Spectr.
Exp Mtr

Spectr. Temp. ..... Dome Temp./Hum. -15°C .. 62% Transparency Conditions OK ... cloud by 03:45 116

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -15.5°C 62.3%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
750		a 7.5	G5+ KO	PCS Red Col	1800/52.7	RS	5120Å	IA		haze down there	
400 *								IA		* counts up to 800 though	
500 10								IA			
150 10								IA			
600 20								IA		MAX @ 03:24 sagittal	
600 15								IA		(end at West Limit Nprop)	
200 10								IA		white unreversing	
										no - white closing	
1050 30								IA			

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Sun/Mon
17/18

Date 1989 Dec ~~16/17~~ Observers Mki / SAS

Emulsion Batches:
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.....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
SPpp2408	Flat at platform			16:30	19:30			A=1/4 Tung	3hr
2409	Comp			0h 01				A=1/2 FeA	200s
2410	V471 Tau	0344.7	+16°57	~~0h 11~~	0h 31	2h 11 W	+17° 15		1200s
2411	V471 Tau	03 44.7	+16°57	0h 32	0h 52				1200s
2412	Comp			0 53				A=1/2 FeA	200s
2413	V471 Tau	03 44.7	+16°57	0h 58	01h 18	2h 58 W			1200s
2414	V471 Tau	03 44.7	+16°57	01h 18	01h 38	~~2h 58 W~~			1200s
2415	Comp			01h 40					200s
2416	V471 Tau	03 44.7	+16°57	01h 44	02h 04	3h 45 W			1200s
2417	V471 Tau	03 44.7	+16°57	02h 05	02h 25				1200s
2418	Comp			02h 26					200s
2419	V471 Tau	03 44.7	+16°57	02h 30	02h 50				1200s
2420	Comp			02h 51					200s
2421	Comp			3h 15				A=1/2 FeA	200s
2422	HD 65583 (1989.5)	7h 59 53.3	+29 1442	3h 20	03h 40	01h 11 W	+29 17		1200s

Spectr. Temp. ..... Dome Temp./Hum. -12°/67% Transparency Conditions partly cloudy + hazy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... buffer Overcast until 23:00

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit & RS	Emulsion	U.T.	Program	Remarks	Quality
A/B 2400				PCS Red Coll	1800/63°		6600 Å	IA	MKi pgm		
10/130	Poor							IA			
10/60		V 9.5	KOV					IA			
10/70		V 9.5	KOV					IA			
10/130								IA			
10/55		V 9.5	KOV					IA			
10/50		V 9.5	KOV					IA			
10/130								IA			
10/50		V 9.5	KOV					IA			
10/70		V 9.5	KOV					IA			
10/130								IA			
10/60		V 9.5	KOV					IA			
10/130								IA			
10/130								IA			
10/500		7.00	dG7					IA		& Radial Velocity	

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Date 1989 DEC 17/18 Observers Mki/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP00 2423	Comp			3h42	03 45			A=1/2 FcA	200S
2424	Comp			3h57				A=1/2 FcA	200
2425	HD 92588 (1989.5)	10h40 52	-1° 1410	4h02	4h 22				1200
2426	Comp			4h23	4h 26			A=1/2 FcA	200S
2427	Flat at platform			4 45				A=1/4 TUNG	3hr

Spectr. Temp. ..... Dome Temp./Hum. -13°C/75% Transparency Conditions ... clear, a few clouds.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... buffer

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
A/B				PCS	1800/	RS	6600Å	IA	MKi Prgm		
10/130				Red Coll	63°						
10/130								IA			
20/1000		626	sgK1					IA		Sh. Rad. Velocity (3/4 moon)	
10/130								IA			
30/2100								IA			

Date 1989 Dec 18/19 Mon/Tue Observers SAS (Hdy. in 24")

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SPØØ2429	Flat			16^h 30				A=1/4 Tung	1 hr
30	Comp			17^h 37				A=1/2 FeA	200s
31	V471 Tau	$3^h 44.7$	+16°57	$17^h 43$	$18^h 03$	$4^h 13$ E	17° 14		1200
32	V471 Tau	$3^h 44.7$	+16° 57	$18^h 05$	$18^h 25$				1200s
33	Comp			$18^h 27$				A=1/2 FeA	200s
34	V471 Tau	$3^h 44.7$	+16° 57	$18^h 31$	$18^h 51$	$3^h 24$ E			1200s
35	V471 Tau	$3^h 44.7$	+16° 57	$18^h 52$	$19^h 12$				1200s
36	Comp			$19^h 13$				A=1/2 FeA	200s
37	V471 Tau	$3^h 44.7$	+16° 57	$19^h 19$	$19^h 39$				1200s
38	V471 Tau	$3^h 44.7$	+16° 57	$19^h 40$	$20^h 00$				1200
39	Comp			$20^h 01$				A=1/2 FeA	200s
40	V471 Tau	$3^h 44.7$	+16° 57	$20^h 13$	$20^h 33$				1200s
41	V471 Tau	$3^h 44.7$	+16° 57	$20^h 34$	$20^h 54$	$1^h 20$ E			1200 s
42	Comp			$20^h 55$				A=1/2 FeA	200s
43	V471 Tau	$3^h 44.7$	+16° 57	$21^h 00$	$21^h 20$				1200

Spectr. Temp. ..... Dome Temp./Hum. -9.5°C/63% Transparency Conditions ..... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -12°C/73% buffer

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
A/B 2300				PCS Red Coll	1800/ 63°	RS	6600 Å	IA	Hdy prgm		
10/130								IA			
10/100		V 9.5	KOV					IA		*Ch. B out out	
10/100		V 9.5	KOV					IA			
10/130								IA			
10/105		V 9.5	KOV					IA			
10/100		V 9.5	KOV					IA		(Header Dec & RA wrong upto this exposure)	
10/130								IA			
10/100		V 9.5	KOV					IA			
10/130		V 9.5	KOV					IA			
10/130								IA			
10/150		V 9.5	KOV					IA			
10/150		V 9.5	KOV					IA			
10/130								IA			
10/120		V 9.5	KOV					IA			

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Date 1989 Dec 18/19 Mon/Tues Observers SAS (Hdy in 24h)

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP 002444	V471 Tau	3h 44.7	+16° 57	21h 21	21h 41				1200s
45	Comp			21h 42				A=42 Fed	200s
46	V471 Tau	3h 44.7	+16° 57	21h 46	22h 06				1200s
47	V471 Tau	3h 44.7	+16° 57	22h 08	22h 28	0h 13 W			1200s
48	Comp			22h 29				A: 1/2 Fed	200s
49	V471 Tau	3h 44.7	+16° 57	22h 33	22h 53				1200
50	Comp			22h 55					200
51	Comp			23h 35					200
52	V471 Tau	3h 44.7	+16° 57	23h 40	24 00				1200
53	V471 Tau	3h 44.7	+16° 57	0h 01	0h 21				1200s
54	Comp			0h 23					200
55	V471 Tau	3h 44.7	+16° 57	0h 27	0h 47				1200
56	V471 Tau	3h 44.7	+16° 57	0h 49	0h 59				1200
57	Comp			1h 00					200
58	V471 Tau	3h 44.7	+16° 57	1h 19	1h 39	3h 25 W			1200

Spectr. Temp. ..... Dome Temp./Hum. -12°C./73% Transparency Conditions .. Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -12°/79%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ buffer	~~P.H.~~	Program	Remarks	Quality
10/120		V 9.5	KOV	PCS Red Coll	1800/ 63°	RS	6600Å	IA	Hdy prgm		
10/130								IA			
10/90		V 9.5	KOV					IA			
8/80		V 9.5	KOV					IA			
10/130								IA			
8/80		V 9.5	KOV					IA			
10/130								IA			
10/130								IA			
10/85		V 9.5	KOV					IA			
10/80		V 9.5	KOV					IA			
10/130								IA			
10/80		V 9.5	KOV					IA			
10/80		V 9.5	KOV					IA			
10/130								IA			
10/80		V 9.5	KOV					IA			

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Date 1989 Dec 18/19 Mon/Tues Observers SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
S002459	V471 Tau	$3^h44.7$	+16°57	1^h40	2^h00				1200s
60	Comp			2^h02				A=½ FeA	200s
61	V471 Tau	$3^h44.7$	+16°57	2^h06	2^h28				1200
62	V471 Tau	$3^h44.7$	+16°57	2^h30	2^h50				1200
63	Comp			2^h52				A=½ FeA	200
64	Comp			3^h27				A=½ FeA	200
65	HD65583	$7^h54.3$	+29°31	3^h33	3^h48				1200
66	Comp			3^h49					
	flat					aperture? filter?			

Spectr. Temp. ..... Dome Temp./Hum. -12/.79% Transparency Conditions ...Clear.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -12/.79% -clouded over @ 3:45

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Detector	P.I.	Program	Remarks	Quality
10/80		9.5	KO2	PCS RedCcd	1800/ 63°	RS	6600Å	IA	Hdy prgm		
10/130								IA			
7/35		9.5	KO2					IA		light cloud	
10/50		9.5	KO2					IA			
10/130								IA			
10/130								IA		(wrong header)	
10/~100		7.0	dg7					IA		Stopped due to cloud	
10/130											

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Date 1989 Dec 21/22 Thur/Fri Observers T.n./SAS/LZZ

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP002470	Flat			~~16~~:53	17:53		ND 2.0 only	A=1/2 Tung	1hr
2471	Comp			18:~~1~~1			no ND	A=1/2 FeNe	200s
2472	HD 11503 (south)	01 48.0	+18 48 ~~19 17~~	18:20	18:30		19 18		600s
~~73~~	HD 11503 (south)	01 48.0	~~+18 24~~	18:31					600s
73	HD 11503 (south)	01 48.0	18 48 ~~18 24~~	18:35	18:45				600s
74	HD 11503 (south)	01 48.0	+18° 48 ~~18 24~~	18:47					600s
75	Comp							A=1/2 Tung	200s
76	HD 11503 (south)	01 48.0	+18° 48 ~~18 24~~	19:03	19:13				600s
~~77~~	HD 11503 (south)	01 48.0	+19 17	19:14					600s
77	HD 11503 (south)	01 48.0	+18° 48 ~~18 24~~	19:15	19:25				600s
78	HD 11503 (south)	01 48.0	+18° 48 ~~18 24~~	19:27	19:37	0h 30 E			600s
79	Comp			19:38				A=1/2 FeNe	200s
80	HD 11503 (South)	01 48.0	+18 48 ~~18 24~~	19:42.5	19:52.5				600s
81	HD 11502 (North)	(~~20~~) 01h ~~48~~ 80	+18° 48	19:53	20:03				600s
82	HD 11503 (South)	01 48	+18 48	20:08	20:18				600s

Spectr. Temp. ..... Dome Temp./Hum. -14/47% Transparency Conditions .. Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -17/56%

Exp. Mtr. B / A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
*530/35				PCS RedCell	1800/ 46°.0	RS	4040Å	IA	AST 1040	*89K cnts/mm in "B"	
220/10								IA			
2000/35		V= 4.68	AØp					IA		F1 to B bombed (all lights on)	
							not written				
1800/30		V= 4.68	AØp					IA			
2000/30		V= 4.68	AØp					IA			
230/10								IA			
2200/35		V= 4.68	AØp					IA			
							not written			F1 to B cut out again (all lights on)	
2200/35		V= 4.68	AØp					IA			
2300/35		V= 4.68	AØp					IA			
240/13								IA			
2000/34		V= 4.68	AØp					IA			
1500/30		V= 4.59	B9V					IA			
1500/30		V= 4.68	AØp					IA			

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Date 1989 Dec 21/22 Observers Tn/SAS/LZZ

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
83	Comp			20:20				A=½ 9 FeNe	200
84	HD 11503 (South)	01h 48m	+18° 48'	20:29	20:39				600s
85	HD 11503 (South)	01h 48	18 48	20:40	20:50	0h 42 W			600s
86	HD 11503 (South)	01h 48	+18 48	20:52	21:02				600s
87	Comp			21:04					200s
88	HD 11503 (South)	01h 48	+18 48	21:08	21:18				600s
89	HD 11503 (South)	01h 48	+18 48	21:19	21:29	1h 22 W			600s
90	HD 11503 (South)	01h 48	+18 48	21:31	21:41				600s
91	Comp			21:44				A=½ FeNe	200s
92	HD 11503 (South)	01h 48	+18 48	21:48.4	21 58.4				600s
93	"	"	"	22:01.0	22:11.0				600
94	"	"	"	22:11.7	22:21.7				600
95	Comp			22:23				A=½ FeNe	200
96	HD 11503 (South)	01h 48	+18 48	22:28.0	22:40				600
97	HD 11502 (North)	01h 48	+18 48	22:41	22:51				600

Spectr. Temp. ..... Dome Temp./Hum. -17/5% Transparency Conditions ... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -19/63%

Exp. Mtr. B/A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
240/10	Poor			PCS Red Coll	1800/4800	RS	~~4040~~ X	IA	AST L22 1040		
1800/30		V= 4.59	B9V					IA			
1500/30		"	"					IA			
1500/30		"	"					IA			
240/10								IA		(wrong header)	
1800/30		"	"					IA			
1700/30		"	"					IA			
1500/30		"	"					IA			
240/10								IA			
1700/25		"	"					IA			
1900/30		"	"					IA			
1500/30	V poor	"	"					IA			
240/10								IA			
1500/20		"	"					IA			
1300/30		4.59	A0p					IA			

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Emulsion Batches:

Date 1989 Dec 21/22 ... Observers LZZ/SAS/JM .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
98	HD 11503 South	01 48.0	+18 48	22 54.2	23 04.2	W	+		600
99	Comp							FeNe A=1/2	200
SP00 2500	HD 11503 South			23 11.5	23 21.5				600
01	"			23 22.2	23 32				600
02	HD 11503 South			23 38	23 43	03 38W			600S
03	Comp							FeNe A=1/2	200
04	HD 11503 South			23.52.0	00:02	03 57W			600
05	"			00:07	00:17				600
06	"			00:18	00:28				600S
07	Comp			00:29				A=1/2 FeNe	200
08	HD 11503 South			00:34	00:44	04 36W			600S
09	HD 11503 South			00:45.7	00 55.7				600S
10	Comp			0:57					200S
11	HD 23480 23TAU	03h40'23	23° 38 13	1:08.7	01 18.7				600S
12	Comp							A 1/2 FeNe	200

Spectr. Temp. ..... Dome Temp./Hum. ..-19.5/63% Transparency Conditions ..Sl. Hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..-21./68%

Exp. Mtr. B / A	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
1000 / 18		4.59 ~~B9V~~	B9V	PCS	1800/46.0	RS	4040Å	IA	AST 1040Y		
250 / 15								IA			
1200 / 25								IA			
1300 / 20								IA			
1100 / 20								IA			
								IA			
1000 / 20								IA			
1100 / 20								IA			
1000 / 20								IA			
170 / 10								IA			
900 / 20								IA			
800 / 10								IA			
130 / 10								IA			
1300 / 15		4.2	B6IVe					IA	fds rad.vel		
200 / 10								IA			

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Date 1989 Dec 21/22. Observers LZZ/SAS/JTn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
S00 2513	HD 23302 17 Tau 4	03 38 56	23 47 57	01:25		3h 36 W	+24° 07		600s
14	Comp						No ND	A=1/2 FeNe	200s
15	HD 23630 25 Tau 4	03h 41 32	23° 47' 46	01:45.6	01 55.6	03 55W	+24 07	N.D. 0.3	600
16	Comp								200
17	HD 23302 17 Tau	03h 38 56	+23° 47 57	02:09	02:19		~~ND~~	ND 0.3	600
18	Comp			02:20			No ND	A=1/2 Tung	200
19	HD 23480 23 Tau	03h 40 23	+23° 38 13	02:25	2:~~45~~	04 46W		ND 0.3	1200s
20	Comp			02:46.8				A=1/2 Tung	200
21	HD 25940 MX PER	04h 01 24	+47 26 44	02:54	03:14	0455W		ND .3	1200
22	Comp			03:15					200
23	HD 25940 Mx Per	04h 01 24	+47 26 44	3:20	3:30			NO N.D.	600
24	Comp			3:32					200
25	HD 102870	~~11h 45 05~~	~~+47 26~~ +2° 20	3:45.5	3:55				600
26	Comp			3:59					200
27	HD 102870	11h 45.5	+2° 20	4:07.4	4 27.4	0136E		ND 0.3	1200

Spectr. Temp. ..... Dome Temp./Hum. ...-21/68.. Transparency Conditions ...Sl. hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ...-22/66

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H. (buffer)	Program	Remarks	Quality
B/A				PCS	1800/						
2500/55		3.7	B6 III e	Red Coll	46:0	RS	4040	IA	Fds Rad Vel		
225/13								IA			
3000 40		2.9	B7 III e					IA	"	Note ND 0.3 ms telluric bar	
								IA			
1200/		3.7	B6 III e					IA	"	"	
170/15								IA			
500/10		4.2	B6 III e					IA	"	(wrong coords in Header) "	
150/10								IA			
900/20		4.0	B3 V e					IA	"	"	
170/10								IA			
1900/		4.0	B3 V e					IA		" No N.D.	
160/13								IA			
1300/25		3.61	F9 V					IA	St Vel		
290/14								IA			
600		3.61	F9 V					IA	St Vel	ND 0.3	

Date 1989 Dec. 21/22 Observers Lee/SAS/Tn

Emulsion Batches:
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.....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Spec 2528	Comp			4:30				A = 1/2 FoNe	200
2529	Flat ....?						ND = 2.0	A = 1/2 ~~Fe~~ Two	7200

Spectr. T
Focus ..
Spectr.

Exp. Mtr.

Spectr. Temp. ..... Dome Temp./Hum. ...22/67... Transparency Conditions ...Clear.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

anson Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200	300/15											
200	1000/25										new bulb made	
											poor contact in socket —	
											better adjustment also needed	

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Date 1989 Dec. 22/23 Fri/Sat Observers Tn/SAS/LZZ...

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Spec 2530	Flat			16:50			ND=2.0	A=½ Tung	1hr
31	Comp							A=½ FeNe	200
32	HD 11503 South	$01^h 48^m$	$+18° 48'$	18:13	18:23				600
33	HD 11503 S	"	"	18:26	18:36				600
34	HD 11503 S	"	"	18:47	18:57			ND.3	600
35	Comp			19:01				A=½ FeNe	200
36	HD 11503 S	"	"	19:06	19:16			ND.3	600
37	HD 11503 S	"	"	19:17	19:27			ND.3	600
38	HD 11503 S	"	"	19:28	19:38			ND	600
39	Comp			19:39				A=½ FeNe	200
40	HD 11503 S	"	"	19:43	19:53				600
41	HD 11503 S	"	"	19:54	20:04				600
42	HD 11503 S	"	"	20:10	20:20			ND 0.3	600
43	Comp			20:21				A=½ FeNe	200
44	HD 11503 S	"	"	20:25.5				ND .3	600

Spectr. Temp. ..... Dome Temp./Hum. 17°/67% Transparency Conditions Part cloudy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~ Buffer	Program	Remarks	Quality
A/B 30/1120	good			PCS Red Coll	1800/ 46°.0	RS	4040Å	IA	L22 AST 1404		
~~3661~~								IA			
		49	B9V					IA			
35/2000		"	"					IA			
40/2500		"	"					IA		ND 0.3	
17/270								IA			
20/1000		"	"					IA		"	
20/900		"	"					IA		"	
30/2000		"	"					IA		NO ND: cloudred	
17/270								IA			
50/2500		"	"					IA			
50/3000		"	"					IA		Cleared	
35/2000		"	"					IA		ND 0.3	
17/280								IA			
35/1900		"	"							ND 0.3	

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Date 1989 Dec 22/23 Observers TM | SAS | LZZ

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP002545	HD11503 North	01 48	+18 48	20:37	20:47	0h43W	+19 17	ND .3	600
46	HD11503 South	"	"	20:49.4	20:59			ND .3	600
47	Comp			21:00.5				A=B Fe Ne	20
48	HD 11503 S	"	"	21 11.0	21:21			ND .3	600
49	HD 11503 S	"	"	21 22	21:32	1h27E		ND .3	600
50	HD 11503 S	"	"					ND .3	600
51	Comp								200
52	Flat. → (#53=Previous Comp)			21 57	22 49	Halted early, (clear)		A=1/2 ND 2.0	3110
53									
54	HD11503 S	01 48	+18 48	22 57.8	23 07.8	W	+19 17	ND .3	600s
55	HD11503 South	"	"	23 17.0	23:27	W		No ND	600s
56	HD 11503 south	"	"	23:25	23 35.0	03 30 W		"	600s
57	Comp								200
58	HD11503 S	"	"	23:43	23:53			No ND	600
59	HD 11503 S	01h48m	+18°48'	23:56	00:06			No ND	600
60	HD 11503 S	"	"	00:08	00:18				600

Spectr. Temp. ..... Dome Temp./Hum. -18.5/72% Transparency Conditions ..Clear.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. (buffer)	Program	Remarks	Quality
30/2000	Good	4.59	A0p	PCS RedColl	1800/ 46°.0	RS	4040Å	IA	LZZ AST 4040Y	N.D. 0.3	
30/1800		4.9	B9V					IA		ND 0.3	
17/290								IA			
30/2000		~~4.67~~ 4.9	B9V					IA		ND 0.3	
35/1900		"	"					IA		ND 0.3	
		"	"					IA		Stopped due to cloud	
								IA			
~~35/1150~~ 30/1150								IA			
25/1000		"	"					IA		ND = 0.3 in stellar Beam	
50/2500		"	"					IA		ND removed from beam	
		"	"					IA			
								IA			
~~30/2500~~ 8000		"	"					IA			
35/2000		"	"					IA			
30/1700		"	"					IA			

141 P3

Date 1989 Dec. 22/23 Observers TM/SAS/LZZ

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Sp 2561	Comp			0:18.5				A = ½ FeNe	200
62	HD 11503 S	01h48	+18 48	0:23.3	00:33				600
63	HD 11503 North	"	"	0:34.5	00:44.5				600
64	HD 11503 South	"	"	00:45	00:55	4:52 W			600
65	Comp			00:56					200
66	HD 23480 23 Tau	03 40.4	+23 38	01:10.5	01:20.5				1200
67	Comp			01 8 31					200
68	HD 23302 17 Tau	3h44.9	+24 06.8	01:36.5	01:46	3h52W	+24 08		600
69	Comp			01:47					200
70	HD 23630 25 Tau	3h41.8	+23 47.8	02:00.8		4 14W	+24 07		600
71	Comp			02:12				A = ½ FeNe	200
72	HD 25940 MX Per	04h01.6	+47 26.7						600
73	Comp			02:36				FeNe A = ½	600
74	HD 102870	11h45.5	+2°20	03:02	03:12			No ND	600
75	Comp			03:14				A = ½ FeNe	200

Spectr. Temp. ..... Dome Temp./Hum. -20/7% Transparency Conditions ... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H. (after)	Program	Remarks	Quality
AIB 10/220				PCS Red Coll	1800/ 46:0	RS	4040Å	IA	422 AST 1040Y		
35/1500	bad	4.89	B9V					IA			
30/1200		4.59	A0p					IA			
25/1450		49	B9V					IA			
17/300								IA			
25/1000		4.2	B6IVe					IA	Fds Rad Vel	ND 0.3	
10/300								IA			
15/1500		3.7	B6IIIe					IA	"	ND 0.3	
13/250								IA			
40/3200		2.9	B7IIIe					IA	"	ND 0.6	
12/250								IA			
		4.0	B3Ve					IA	"	"	
								IA		Uploaded sheet 2x prg	
40/2200		3.61	G9II					IA	Std Vel		
								IA			

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Date 1989 Dec 22/23 Fri/Sat Observers SAS/TM/LZZ

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP0025 76	HD 89449	10^h 14.3	+19 59	3:20·5	3:30			NO ND	600
77	Comp			3:32				A=½ FeNe	200
78	Comp	~~09 40.2~~		03 52				"	200
79	HD84441	~~09 40.2~~	+24 14'	03:59	04 09		Comp #	FeNe 80	6 200
81	HD112185	~~12h 49m 38s~~	~~56° 30'~~				~~Too de~~		
81 ~~82~~	Flat on Timer					A=clear	~~A=176~~ ND 2'0 +0·3	~~UNG~~ Tung	2hr
2583	DARK very long	30ksecs	over Xmass - written Dec 26/89						

Last written record · SP0025841.LZZ 13,711 bytes · 122489 0556 PM

Spectr. Temp. ..... Dome Temp./Hum. -21/71% Transparency Conditions ... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -22°C/71% Buffer

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
AVG				PCS	1800/						
40/2020		4.79	F6II	Red Coll	46°.0	RS	4040 Å	IA	Std Vel		
15/ 380								IA			
15/ 360		468						IA	~~stdvel~~		
/1500		2.98	G3II-6					IA	stdvel	ND=0.6	
		1.8	A0pN (CrEu)							ND=0.6	
30//000								IA		all 022 backed up	

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Tues-Wed

Date Dec. 26/27.1.89 Observers J./SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
~~SP0025 84~~ ~~SP0025 84~~	Flat at 6635Å				≈1800			Tung A=1/8	4000
SP0025 85	FLHT at 5148Å			1832.4	2032	0 0	platform	Tung A=1/8	7200
86	Comp						Reversed	A=½ FeA	200
87	HD 197433	20 38.6	+75 14	2144	22045	W	+7532		1200
88	"	"	"	22062	2216		"		1200
89	Comp			2217				A=½ FeA	200
90	HD 197433	"	"	2234	2254				1200
91	"			2254	2315	0843W			
92	Comp					W		FeAr H-½	200sa
93	HD 197433	20 38.6	+75 14	23222	23:44	W			1200
94	HD 197433	"	"	2345	0005	0933W			
95	Comp			0006					200
96	HD 197433	"	"	0011.6	≈0026				800
97	~~Flat~~ Comp			200secs FeAr	A-1/2	0 0	platform	~~Tung~~ H-1/8	~~7200~~
98	Flat on Timer					0 0	platform	Tung A=1/8	7200

Spectr. Temp. ..... Dome Temp./Hum. -17°C/64% Transparency Conditions .. Hazy -> cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -20.5°C/65% .....

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
35/1600	ND=2.0			PCS Red Cole	1800/63°	RS	6635Å	IA	Hdy Prgm	~~Redetermine~~	
35/1680	ND=2.0				1800/52.9°	RS	*5148Å	IA		* Hotel center of 2048 pi. col II	
					"	"	"	IA			
10/230	BAD	V= 7.5			"	"	"	IA	"	@ 5148Å	
10/230	"	"			"	"	"	IA	"		
10/170								IA			
10/330					"	"	"	IA	"		
15/350					"	"	"	IA	"		
12/180								IA	"		
10/350		(*Note. Integrate Resumed for 300 secs due to failure)						IA	"	Cnts to 600/sec	
15/450								IA	"		
10/180								IA	"		
								IA	"	stopped due to cloud	
~~80/1550~~	~~ND=2.0~~							IA	"		
80/1550	ND=2.0							IA	"		

Emulsion Batches:

Date 1989 Dec 28/29 Observers T.n

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2601.TN	DARK, very Long	Started late Dec 27 or		Dec 28 ~ 02 Hm		0 0	platform		30K
2602.TN	Flat at start			17 50·6	17 50·6	"	"	TUNG A-1/8	7200
2603	DARK Long	from Dec 28/29		01					1000 sec
SP002604.TN	Flat	Focus steps done before starting		Dec 29/89 19 32	21 32	0 0	platform	TUNG A-1/8	7200

Note - Flat #SP002599 written @ 7 52 Pm Dec 27
DARK 2600 written 12 31 Am Dec 28

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
30K >5/>5				PCS Red Cell	1800/5219	RS	5148Å	IA		written Dec 28	
35/1600	ND=~~0~~ 2.0							IA		Signal/mean a 4K start	
Note Flat cnts 100K/min in "B"; 2200/min in "A" for previous Flat											
								IA	wm Rm	Light on	
35/1600	ND=2.0			PCS Red Cell	1800/5219	RS	5148Å	IA		Signal/mean ~4K trapbt	

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Pg #1 Tues-Wed

Date 1990 JAN 2/3 .... Observers T.T. ....(M.K. checking on me)

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
2605	Long Comp for Map Improvement					0 0	platform	Fe Ar A=1/2	400s
	Flat			17 21	17 45	Halted to observe.		Tung A-1/8	880
	Comp							Fe Ar A=1/2	200 ~~1300~~
	V471 TAU	03 44.8	+16 57	17 53.5	18 03.5	03 15 E	+17 15		600
	Comp							Fe Ar A=1/2	200
10	Comp at Hα			~~18 33~~		E		Fe Ar A=1/2	200 ~~600~~
11	V471 TAU	03 44.8	+16 57	18 33.0	18 43.0	E			600s
12	V471	"	"	18 43.3	1903.3	E			1200
13	Comp								200
14	V471 TAU	03 44.8	+16 57	19 11	19 31	E			
SP002615+TN	" "	"	"	19 36	1956	01 21 E	+17 15		1200
16	Comp							Fe Ar A=1/2	200
17	V471 Tau	03 44.8	+16 57	20 07.3	20 27.3	00 50 E			1200
18	"	"	"	20 30	2050	00 27 E			1200
2619	Comp						no DD after	Fe Ar A=1/2	

Spectr. Temp. ..... Dome Temp./Hum. −1.4°C/72% Transparency Conditions Sl Hazy 150

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Dome opaque fans on by 17

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
		No ND.			PCS Ref Cell	PCS 1800/529	RS	5148Å	IH		Waiting for map improvement	
40	1700	ND=2.0			"	"	"	"	IA			
		No ND			"	"	"	"	IA			
10	300		≈95	KOV	"	"	"	"	IA			
					"	"	"	"	IA			
~~—~~	~~—~~				"	1800/630*	"	6600Å	IH		* may be 627 tilt (incorrected)	
10	200				"	"	"	"	IA			
10	200				"	"	"	"	IH			
15	150				"	"	"	"	IA			
10	200				"	"	"	"	IA			
10	200				"	"	"	"	IH			
16	140								IA			
10	200								IA			
10	240								IA			
									IH			

151 pg #2

Emulsion Batches:

Date 1990 JAN 21/3 Observers T.H

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2620.TN	* NW of HD23169 HD			20 58	21 08	00 08W	+2547		600
21	HD23169	03 37.9	+25 25	21 13	21 33	0 22W	+25 44.5		1200
22	Comp							FeAr A-1/2	200
23	V471 TAU	03 44.8	+16 57	21 46	22 06	00 51W			1200
24	"	"	"	22 09.6	22 29.6	01 13W			1200
25	Comp					Reversed		FeAr A-1/2	200
26	BM Cass	00 48.6	+63 33	22 43	23 03	0451W	+		1200
27	"	"	"	23 06.6	23 26.6	0505 W	+6402		1200
2628.TN	Comp					Reversed W	A=clear *	FeAr ~~A-1/2~~	200
2629.TN	V471 TAU	03 44.8	+16 57	23 41.6	00 01.6	W	Reversed 54.N +		1200
30	"	"	"	00 04.5	00 24.5				1200
31	Comp							FeAR Clear	200
32	V471 TAU	03 44.8	+16 57	00 83.0	00 53	0335W	+1713		1200
33	"	"	"	00 54.0	01 14	0356W			1200
34	Comp								

Spectr. Temp. ..... Dome Temp./Hum. −1.8°C / 80.6% Transparency Conditions Hazy 152

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10	400		V2 9		PCS Red Coll	1800/63°	RS	6600Å	IH		W N	
8	500		V 8.75	G2V					IA	stdvel	W	
		no	ND	filter					IA			
10	200		≈9.5 V	K0V					IA			
10	230		"	"					IA			
10	125								IH			
12	460		V ≈9						IH			
15	480								IA			
10	160								IH	*Reversed on V471 TAU, Comp signal was very low: Aperture opened up.		
10	160		V ≈9.5	K0V					IA			
8	130								IH			
10	150								IA			
10	120								IH			
10	140								IA			
									IA			

153 Pg #3

Emulsion Batches:

Date 1990 JAN 21 3 Observers JA

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination Reversal	Comparison Type/Filter	Comparison Exp.
2635	HD 29587	04 34.5	+41 57	01 24	01 34	03 26 W	+42 07	P	600
	Comp					W	+64 01	Fe-Ar Clear	200
	BM Cass	00 48.6	+63 33	01 45	02 05	07 54 W	"		1200
	Comp							Fe-Ar Clear	200
	Flat (on timer)					0 0	Platform ND=2.0	Tung A=Y8	7200
	JAN 3 at Sundown			17 16					3060
2640.TN	FLAT Like previous but with 0.3ND added; Ap=Y4					0 0	platform	Tung A=1/4	~~7200~~
	written @ 18 17 after all FIFO Lights noted								
	∴ FIFO Failure occurred at ≈ 18 07 [about when I turned on the SE Dome Fan within one minute]								
	There had been no failures the night before.								

Spectr. Temp. ..... Dome Temp./Hum. -1.9°C 84% Transparency Conditions ... 5/. hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -2.0°C 85%

Exp. Mtr. A	Exp. Mtr. B	Seeing	Pig. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion λ	P.H.	Program	Remarks	Quality
20	150		V= 7.29	G2	PCS 1800/63°	1800/63°	RS	6600Å	IA	Std Vel	Cuts to 1300/sec Fld checks with chart.	
10	140	(at BM position)		Cass		Reversed			IA			
10	150	poor	N ≈ 9		PCS RedCdl	1800/63°	RS	6600Å	IA		Hazy downbore	
(130-220)		while unreversing							IA			
20	120				PCS RedCdl	1800/63°	RS	6600Å	IA	Note count is lower than flats at 5148Å. Not sure what is normal in this range Dec 26/27, last flat at 6635Å	Check this →	
40/	200	ND = 2.0+0.3 to be on.			PCS RedCdl	1800/63°	RS	6600Å	IA	* Gate for 30 secs	A 1 min 139 2800/min B 1 min 139,200/min	

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Wed-Thurs

Date 1990 JAN 3/4 Observers T.N.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2641.TN	FLAT * (5 min flat on previous page) (2640.TN)			18 34.5	18 57.5	(while opening & setup)		TUNG H=1/4	1380
	Comp at Start			19		E	+17 15	Fe Ar Clear	200
	V471 TAU	03 44.8	+16 57	19 08.0	19 28.0	E	+17 15		1200
	V471 TAU	03 44.8	+16 57	19 31.0	19 51	01 23 E			1200
	Comp							Fe-Ar Clear	200
	V471 TAU	03 44.8	+16 57	19 59.5	20 19.5	E			1200
	"	"	"	20 20.5	20 40.5	E			1200
	Comp							Fe Ar Clear	200 s
	V471 TAU	03 44.8	+16 57	20 50.5	21 10.5				1200
	"	"	"	21 11.5	21 31.5	00 17 W			1200
51	Comp							Fe Ar Clear	200
2652.TN	HD 23169	03 37.9	+25 25	21 38.5	21 55	00 47 W			1000
2653TN	Comp					0 0	platform	Fe Ar Clear	
54.TN	Flat at end			22 16.5		0 0	platform	TUNG A=1/4	7200
	Backed up on 3.5" to end of Flat at end.								
55.TN	Flat for Jan 4/5 - cloudy ND=2+3 A=1/4 cnts=2000/30								

Spectr. Temp. ..... Dome Temp./Hum. +1.7°C 80% Transparency Conditions .... Sl. Hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +1.5°C 80%

gusty from SW

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
45	2 7000	ND=2.0+0.3			PCS Red Coll	1800/63°	RS	6600Å	IA		* Use previous page Flat too	
15	230	no	ND						II			
10	160		⇒V =9.5	KoV					IA	Obs pgm	printed	
10	160								IA			
15	220								IA		printed	
10	160								IA			
10	170								IA			
12	210								IA			
10	160								IA			
8	150								IA		some cloud	
									IA			
18	220								IA	std vel	Halted due to cloud inter cloud	
									IA		printed	
40	1950	ND=2.0+0.3			Ch "A" FFO mtg "out" @ 2310	1800/63°	RS	6600Å	IA	1850 cnts/min	A B 3 min gate ~~2334~~ 2323/min 117K/min	

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Emulsion Batches:

Date 1990 Jan 5/6 Fri/Sat Observers SAS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Slop 2656 •SAS	Flat	@ Platform		16:40	18:06	0h	ND 2.0+ 0.3	Tung A=1/4	5660s
57	Comp			18:33				Fe-A A=clear	200s
58	V 471 Tau	03 44.8	+16 57	18:43	19:03	2h 03 E	+17° 15		+1200s
59	Comp			19:07				FeA Clear	200s
60	V 471 Tau	03 44.8	+16 57	19:12	19:32	1h 33E			1200s
61	V 471 Tau	03 44.8	+16 57	19:38	19:58	1h 07E			1200s
62	Comp			19:59				FeA Clear	200
63	V 471 Tau	03 44.8	+16 57	20:05	20:25	0h 41 E			1200
64	V 471 Tau	"	"	20:26	20:46				1200
65	Comp			20:48				FeA Clear	200
66	V 471 Tau	03 44.8	+16 57	20:52	21:12				1200
67	V 471 Tau	"	"	21:14	21:34	0h 28 W			1200
68	Comp			21:35				FeA Clear	200
69	V 471 Tau	03 44.8	+16 57	21:44	22:04	0h 58 W			1200
70	V 471 Tau	"	"	22:06	22:26	1h 20 W			1200

Spectr. Temp. ..... Dome Temp./Hum. -1°c/64% Transparency Conditions ... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -3/74%

Exp. Mtr. B/A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~ Buffer	Program	Remarks	Quality
2000				PCS Red Coll	1800/ 63°.0	RS	λ= 6600Å	IA	Mk. prgm	1st quarter moon near V471 Tau.	
220/10		V=						IA			
120/10		V= 9.5	KOV					IA		Apparently, prev comp was not cleared.	
220/10								IA			
130/10		9.5	KOV					IA			
180/10		9.5	KOV					IA			
220/10								IA			
200/10	Good	9.5	KOV					IA			
170/10		9.5	KOV					IA			
220/12								IA			
180/10		9.5	KOV					IA			
200/12		9.5	KOV					IA			
220/10								IA			
220/12		9.5	KOV					IA			
230/12		9.5	KOV					IA			

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Date 1990 Jan 5/6 Fri/Sat Observers SAS / MKi

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP#2671 (SAS)	Comp			22:27				FeA Clear	200s
72	V471 Tau	03h 44.8	+16° 57	22:32	22:52	1h 46 W			1200s
73	V471 Tau	"	"	22:53	23:13	2h 07 W			1200s
74	Comp			23:14				FeA Clear	200s
75	V471 Tau	03h 44.8	+16° 57	23:29	23:49				1200s
76	V471 Tau	"	"	23:50	00:11	3h 05 W			1200
77	Fe-Ar Comp.			00:13				FeA clear	200
78	V471 Tau	03h 44.8	+16° 57	00:17	00:37	3h 32 W			1200
79	V471 Tau	"	"	00:39	00:59	3h 54 W			1200
80	Comp			1h:00				FeA Clear	200s
81	V471 Tau	03 44.8	+16° 57	01:05	01:25	4h 19 W			1200s
82	V471 Tau	"	"	01:26	01:46				1200s
83	Comp			01:46.5					200s
84	HD 65583	7 5[illegible]3	29° 3[illegible]	02:02					300s
85	Comp			02:09					200s

Spectr. Temp. ..... Dome Temp./Hum. -3/74% Transparency Conditions .. Clear 160 50

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -5/85% buffer

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
220/10				PCS Red Coll	1800/ 63°.0	RS	λ= 6600Å	IA	MKi prgm	1st quarter moon near V471 Tau.	
170/10		9.5	KOV					IA			
170/10		9.5	KOV					IA			
220/10								IA			
160/10		9.5	KOV					IA			
140/10		9.5	KOV					IA			
120/10								IA			
140/10		9.5	KOV					IA			
150/10		9.5	KOV					IA			
220/12								IA			
90/10		9.5	KOV					IA			
90/10		9.5	KOV					IA			
200/10								IA			
1000/30		7.0	dG7					IA	Std Vel		
"								IA			

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P3 Fri/Sat

Date 1990 Jan 5/6 Observers SAS/MKi

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2686	HD 92588	10 36.3	−1° 13	2h 46					300
87	Comp			2h 52				FeA Clear	200
88	Flat (on timer)	Platform		3h 15			ND=2.0+0.3	Tung A-V4	7200

Spectr. Temp. ..... Dome Temp./Hum. ~5/85 Transparency Conditions ... Cloud 162

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ~5/85

Coffee

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B/A 900/10	bad	6·26	sgkl	PCS Red Coll	1800/ 63°0	RS	λ= 6600	IA	Std Vel	Cloud.	
190/15								IA			
1900/30								IA			

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Sat/Sun

Date 1990 Jan 6/7 Observers SAS / S. Chan

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SPØ 2689	Flat	platform		17:00	17:41		ND 2.0+0.3	Tung A=1/4	2500
90	Comp			17:55			No N.D.	FeA A=clear	200
91	V471 Tau	03h 44.8	+16° 57	18:02	18:22		"		1200s
92	V471 Tau	"	"	18:29	18:49				1200s
93	Comp			18:51				FeA A=clear	200s
94	V471 Tau	03h 44.8	+16° 57	18:55	19:15				1200
95	V471 Tau	"	"	19:17	19:37	1h 24E			1200
96	Comp			19:39				FeA Clear	200
97	V471 Tau	03 44.8	+16° 57	19:50	20:10				1200
98	V471 Tau	"	"	20:11	20:31				1200
99	Comp			20:34				FeA Clear	200
2700	V471 Tau	03h 44.8	+16° 57	20:38	20:58	00h 03E			1200
01	V471 Tau	"	"	20:59	21:19				1200
02	Comp			21:20				FeA Clear	200s
03	V471 Tau	03h 44.8	+16° 57	21:25	21:45	00h 43 W			1200

Spectr. Temp. ..... Dome Temp./Hum. -3/66% Transparency Conditions ... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
B/A 2000/35				PCS Red Coll	1800/ 63°.0	RS	λ = 6600Å	IA	Mki pgm	Cut at 2500s to begin observing.	
230/15								IA			
80/10	bad	9.5	KOV					IA		Moon very close - 45 min RA; 5° Dec	
80/10	bad	9.5	KOV					IA		Turned off one FAN directly below dome slits Refocused.	
220/10								IA			
60/10	bad	9.5	KOV					IA		TEMP falling quickly	
80/10		9.5	KOV					IA			
								IA			
100/10		9.5	KOV					IA			
100/10		9.5	KOV					IA			
200/12								IA		Turned fan back on	
100/10		9.5	KOV					IA			
100/10		9.5	KOV					IA			
210/15								IA			
110/10	Poor	9.5	KOV					IA		Seeing is better	

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P2

Emulsion Batches:

Date 1990 Jan 6/7 Sat/Sun Observers S.A.S / S. Chan

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP∅∅ 2704	V471 Tau	03 44.8	+16° 57	21:47	22:07				1200
05	Comp			22:07.5				FeA Clear	2005
06	V471 Tau	03h 44.8	+16° 57	22:13	22:33	1:31 W			1200
07	V471 Tau	"	"	22:33.5	22.53.5	1:51 W	+17° 15		1200
08	Comp			22:55				FeA Clear	200
~~09~~	~~V471 Tau~~	~~03h 44.8~~	~~46° 57~~	~~23:~~					
09	Flat (on timer)	platform		0h 52			ND=2.0+0.3	Tung A=1/4	7200

Spectr.
Focus.
Spectr.
Exp Mtr
6/A

Spectr. Temp. ..... Dome Temp./Hum. -7°/74% Transparency Conditions ... Clear ..... 166 ,5

Focus .....

→ Cloud @ 23h

Spectr. Temp. ..... Dome Temp./Hum. -7/75% buffer

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
B/A 170/10	fair	9.5	KoI	PCS Red Coll	1800/ 63°0	RS	λ = 6600Å	IA	Mki pgm		
210/15								IA			
130/10		9.5	KoI					IA			
		9.5	KoI					IA			
220/15								IA		Clouded over	
								IA			
1900/35								IA			

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Date 1990 Jan 7/8 Sun/Mon Observers SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Slop 27 10	Flat	~~0h 48.~~	platform	16:49	18:49	ND = 2.0 + 0.3		Tung A = 1/4	7200s
11	Comp							A = clear FeA	200s
12	BM Cass	0h 48.6	+63 33	19:42	20:02	2h 01 W	+64 03		1200s
13	BM Cass	"	"	20:06	20:26	2h 25 W			1200s
14	Comp			20:28				clear FeA	200s
15	BM Cass	0h 48.4	+63 33	20:37	20:57	2h 56 W			1200s
16	BM Cass	"	"	21:00	21:20	3:19 W			1200
17	Comp			21:21				A = clear FeA	200
18	BM Cass	0h 48.6	+63 33	21:25.5	21:45.5	3h 45 W			1200
19	BM Cass	"	"	21:47	22:07	4h 06 W			1200s
20	Comp			22;08				A = Clear Fe-A	200
21	Sky (near BM Cass)	↓		22:13	22:33	4h 32 W			1200
22	Comp			22:57				Fe A Clear	200
23	HD 29587	4h 34.5	+41°57	23:02	23:12				600s
24	HD 65583	7 54.3	+29°31	23:31	23:41	1h 26 E			600s

Spectr. Temp. ..... Dome Temp./Hum. 0°/84% Transparency Conditions .. light Cloud 168

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -1°/85% buffer

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~	Program	Remarks	Quality
B/A 1800/35				DCS Red Coll	1800/ 63.0	RS	λ= 6600Å	IA	Mki pgm		
150/								IA			
190/12		8.82- 9.33						IA		Telescope "Reversed"	
180/12		"						IA			
150/								IA			
170/10	Poor	"						IA			
150/10	bad	"						IA			
150/10								IA			
140/10		"						IA			
200/10		"						IA			
140/10								IA			
10/10								IA			
200/10								IA		Unreversed Telescope	
1000/20		7.79	62					IA			
1200/25		7	dg 7					IA			

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Emulsion Batches: .....

Date 1990 Jan 7/8 Sun/Mon Observers SAS ....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
P00 27 25	Comp			23:43				Clear FeA	200
26	Comp			0h:14					200
27	AS Cam	05h 18.8	+69 25	0h:18.5	0:38		+69 23		1200
28	Comp			1h:10					200
29	HD 92588	10h 36.3	−1° 13	1h:21	1h 26	2h 22E	−1° 40		300
30	Comp			1h:34					200
31	Flat	platform		2h:07		ND = 2.0 + 0.3		TUNG A>1/4	1800

Spectr. Temp. ..... Dome Temp./Hum. -1°/85% Transparency Conditions ..... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -1°/86%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ buffer	P.H.	Program	Remarks	Quality
200/12				PCS Red Coll	1800/ 63°0	RS	λ= 6600Å	IA	Hki prgm		
190/12								IA			
1000/20	fair							IA			
200/13								IA			
1800								IA			
200/15								IA			
850/20										Sky Flat at end has dropped too 850 counts from 1800 !!	

Emulsion Batches: .....

Date 1990 Jan 8/9 Mon/Tues Observers SAS/Chan .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SPPO 2733	Flat	platform		17:25	19:25		ND=2.0+0.6	A=1/8 Tung	7200
34	Comp			23:27.5			NO ND	A=1/2 Fe-A	200
35	V471 Tau	03h 44.8	+16° 57	23:32.5	23:52.5		17° 15		1200
36	Sky near V471 Tau			23:54	0:14				1200
37	Comp			00:15				A=1/2 Fe-A	200
38	V471 Tau	03h 44.8	+16° 57	00:20.5	00:40.5	3h 48 W	+17° 15		1200
39	Comp			00:47				A=1/2 Fe-A	200
40	Flat	platform					ND=2.0+0.6	Tung A=1/8	10800
41	Flat	platform	Jan 11/12	15 48.5	17 48.5	0 0	ND 2.0+0.6	Tung A=1/8	7200x

Spectr. Temp. ..... Dome Temp./Hum. +1°/79%. Transparency Conditions. partly cloudy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 0.5°/77%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
B/A 1800				PCS Red Coll	1800/ 63°.0	RS	λ = 6600Å	IA	Mki prog.	ND 2.0+0.6	
170/ 10								IA		NO N.D.	
150/	bad	9.5	KoI					IA		Bright moon nearby	
12/5								IA			
150/15								IA			
150/ 10		9.5	KoI					IA			
150/ 10								IA		Clouds	
1900/30								IA			
1850*/30								IA		written on plate res of 1 45 00 cm/mm	
	57K/30sec, 1,060/30secs (gate)						191K B	3500 in 100 secs. H		190, 35 Å/mm	

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Emulsion Batches:

Date 1990 Jan 15/16 Observers JH/SHS/KK

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42	Flat for 831/33.4 deg grating		JAN12/13/90	23 49		0 0	platform	TUNG A=1/2	7200s
43	Flat 01/13/90		JAN13/14/90		~17 50	"	"	A=1/8	7200s
44	Comp for map					"	"	FeNe A=1/4	600
	Comp for map					"	"	Fe-Ar A=1/4	600
2745	Flat 01/14/90			17:21	19:21			A=1/8 Tung	7200
2746	Sky								1200s
2747	Comp							A 1/2 Fe A	132s
2748	Flat							A 1/4 Tung	7200s
2749	Flat (at Lower rate)			17 36	19 36			A 1/8 Tung	7200
2750	DARK			00 36	01 28				3120
2751	Comp						Mo ND	Fe Ar A 1/4	200
2752	BD +88 4			1:54.5	2:14.5	07 22W	88° 56		1200
2753	Comp			2:15.5	2:19				200
2754	BD+889			2:26.5	3:26.5	07 30W	89 03		3600
2755	Comp			3:28				Fe Ar A-1/4	200
2756	Flat	at Plat form		3:40				TUNG A-1/4	7200

Spectr. Temp. ..... Dome Temp./Hum. 0°/94%... Transparency Conditions ..Fog.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 0°/95%.

Exp. Mtr. B / A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ λ	P.H.	Program	Remarks	Quality
2250 50	ND = 2.0			PCS Red Coll	831/33.4°	RS	4160Å	IA		written	
1250 35	ND = 2.0			PCS RC	150/28.6°	BS	4300Å	IA		with not blue order sep filter written	
300	no ND			"	"	"	"	IB	* actual center	@ 4185Å written for MAPS	
270	no ND			"	"	"	"	II	" "	@ 4185Å not written	
1250/30	ND 2.0			PCS RC	150/28.6	BS	"	IA			
2300/40				"	"	"	"	"			
500				"	"	"	"	IB			
B A 3000/	ND 2.0			"	"	"	"	IA		written	
1250/45	ND 2.0			"	"	"	"	IA		written	
				PCS RS	150/ 28.6	BS	4300Å	II			
200		~~6.5~~	~~A2~~	"	"	"	"	IA		T=0°C H=94% Reversed	
2000/55		6.5	A2	"	"	"	"	IA	KK prgm	Polaris C2	
140/10				"	"	"	"	IA			
350/20		8.0	F2	"	"	"	"	IA	"	Polaris C4	
110/9				"	"	"	"	IA			
2150/80	ND = 2.0 + 0.3							IA			

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Thurs - Fri

Date ..Jan..18/19./1990. Observers ..Fels.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Min
	1 FLAT, 3 DARKS & 2 comps in RET.DAT at START of Observing.									
	comp for ROCi								10s	
	HD 354685 800	5 19 46	6 15 33	19 56	20 29					3300
	comp								10s	
	comp								10s	
	HD26912 μTAU	4:10	-8 38.5	20:43	21:23					44
	comp								10s	
	comp									
	HD 23680 25TAU	03 41.5	23 47.5	21:36	22:10					251
	comp								10s	
	4 flats @ 12s	850, 848, 860, 856								
	4 flats @ 9s	2973, 2575, 2834, 2865								
	comp		slit narrowed to .271 75M						10s	
	HD 35468	5 19 46	6 15 33	22:33	23:03					532
	comp								10s	
	4 flats @ 10s	397, 396, 394, 393								

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ X-Scat	~~P.H.~~ Dawn	Program	Remarks	Quality
	Poor				17.62	.241 (50μ)	.4858	2.5°	order 124	λ = 4567 Å.	
3300		1.64	B2III								2727
											1947
											1967
414		4.29	B3IV							Partly cloudy. with wisps	267
											1867
1251		2.29	B7Ve								811
											1915
											1836
532		1.64	B2II							Clouded out	407
											1804

177 #1

Fri-Sat

Date 1900 JAN 19/20 Observers Ed.s-Th

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Prompted Flat at start		~~01 58~~	at ECASS	position		+63 37		~~40sec~~
	Comp for ECASS						"	ThA	10sec
	HD 11415	01 47.2	+63 11	18 16	18 39	0013 E	+63 37		
	comp at ECass position								10 sec
	4 flats @ 14s	&14,800,796,787			18 45				
	Comp for YORI								10sec
	HD 35468 YORI	05 19.8	+6 16	18 53	19 23	02 24E			
	comp								10 sec
	HD 35468 YORI	05 19.8	+6 16	19 25	19 50	01 57 E			
	comp								10 secs
	HD 35468	05 19.8	+6 16	19 52	20 31	01 16E			
	Comp								10 secs
	HD 35468 YORI	05 19.8	+6 16	20 34.5	21:13.5	00 32E			
	comp								10
	HD 35468	05 19.8	+6 16	21 :15.	21:58.5	0013W			
	comp								10

Spectr. Temp. ..... Dome Temp./Hum. -3°C / 59% Transparency Conditions ..Clouding in.....

Focus ..... Dewar top type 18ES T, T=+0.182

Spectr. Temp. ..... Dome Temp./Hum. ..... Dewar tilt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	~~P.H.~~	~~Program~~ ORDER	Remarks	Quality
		~~3.38~~ V	~~B3III~~	Echelle Reticon	Tilt 1762	~~150u~~	4567A	2.5°	124	X grating .4888	1088
						180u					1797
1500		3.38 V	B3III			150u					880
						150u					1808
~~1500~~						150u					
						75u					1843
2000		1.64 V	B2III			75u				wk 4pt.	~~1436~~
						75u					1860
2050		1.64 V	B2III			75u					1383
						75u					1911
2500		1.64 V	B2III			75u				T=+0.208 4pt.	1801
						75u					1901
2100		1.64 V	B2III			75u					1457
						75u					1872
1985		1.64	B2III			75u					1582
											1896

179 pg #2 Fri-Sat

Date 1990 JAN 19/20 Observers Fds-Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	HD 35468 roRI	05 19.8	+6 16	21:59	22:35	00 50W	+6 22		
	comp							TnA	10
	HD 35468 roRI	05 19.8	+6 16	22:37	23 00	01 15 W			
	comp								10
	comp								10
	HD 35468 roRI	05 19.8	+6 16	23.07	23 26	01 41 W			
	Comp								10
	HD 35468 roRI	05 19.8	+6 16	2327.5	23 52.5	02 07W			
	Comp								10
	HD 35468 roRI	05 19.8	+6 16	23 54	00 39.5	02 54W			
	comp								10
	4 flats @ 30s	1249, 1204, 1223, 1229							
	4 flats @ 40	1594, 1548, 1524, 1527							
	4 flats @ 55	2104, 2103, 2109, 2116							

Spectr. Temp. ..... Dome Temp./Hum. -3.5°C / 62% Transparency Conditions Hazy - cloudy ..... clearing up

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program ORDEO	Remarks	Quality
2500		✓ 1.64	B2 III	Echelle Reticon	17.62	75u	4567 hyp	25°	124		1988
											1873
2500		✓ 1.64	B2 III							—	1783
											1818
										After dewar top up.	1793
2516		1.64	B2 III							T = +0.212	1888
~~1576~~											1752
3000		1.64	B2 III								2024
											1761
1844		1.64	B2 III							Dmy. Cloudy.	1221
											1740

MIRROR Figure Hartmann tests

Mo.-Tues

Date 1900 JAN. 22/23... Observers K.T.-T.A./T.A.....

Emulsion Batches:

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Plate No.	Object	R.A. ~~1900~~ 1950.0	Declination ~~1900~~	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
N	ε Per -	03 57.2	+39 58	20 27	20 30	00 22W	+40°		
	31 Lyn	08 22.2	+43 13	20 ~~35~~	20 ≈ 40	03 48E	+43 14		
O	Sirius	06 44.7	-16 42	21 59	22 01	0053E	-16 39		
P	α CMi	07 38.8	+5 15	23 55		0008W	+5 17		
Q	25 π TAU	03 46.9	+24 05	00 09	00 13	0417W	+24 07		
	10 β CAM	05 02.6	+60 26		00 28	0315W	+60 29		
	"	"	"		00 30	0317W	"		
	JAN 24/25 Wed-Thurs	Ja							
	Flat (1st after PCS work)			20 46	22 46	00	Platform	TungA=1/8	720
	22θ Hya	09 13.9	+2 21		01 18	0005W	+2 23		
	BS 1605	05 01.3	+43 49			0430W			
	3775	09 32.2	+51 43			0005W	+51		
	11 α Dra	14 04	64 25			C422E			
	7310	19 12.6	67 39			0917E			

Spectr. Temp. ..... Dome Temp./Hum. 0°C / 90% Transparency Conditions .. Mostly Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -3°C / 95%

Dome opened & Fans on by 19 EST
Light SW wind

Exp. Min. Times	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10 20 40 secs, + 20 secs				35mm CAMERA	MASK at end of Tube				Hartman Figure Tests	Semi Cloudy	30s good
40, [80 sec (cloud float)]										Semi Cloudy – complete cloud/blank	
3, 6, 12 secs		V +1.46	A0 m							Part Cloudy – Completely	
3, 6, 12, 20 secs		V +0.38 ~~F7~~		B-V = +0.42 (sp F5 IV-V)					Fans on again	at 2345	6 good
8, 16, 22, 35 secs		V 2.87	B7 III	B-V = -0.09							36s weak
10, 20, 30, ~~45~~ sec		V 4.03	G1	B-V = +0.92					[These 3 exps may be w. guider] ie not extend		blend 1:54
45 secs		"	"	"	Last one on roll				This one should be well centered of last.		weak
B / A											
1550/35	ND 2.0 + 0.6			PCS AC	1800/63°	BS	6640Å	IT	Grating Rotated to max signal in CH "B" = 5000 cts max extended exp. 2 hrs worth		
5, 10, 20, 30 secs		V 3.88	B9.5 IV	35mm Camera		(Kodak TP film)			Hartman Mask Mirror figure tests		
3, 6, 12, 26)		V 2.99	F0 Ib	B-V +0.54							
5, 10, 20, 30		V 3.17	F6	B-V = +0.46							
"		V 3.65	A0 III	B-V = -0.05							
7, 13, 26, 35		V 3.07	G9	B-V = +1.00							

Emulsion Batches:

Date 1990 JAN 24/25 Observers T.D.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	BS 6235	13 54.2	+18 27		02 14	03 42E			
	BS 3994	10 10.1	-12 18		02 30	00 20W			
	DARK	while observing		00 36	01 36				
Jan 26/90	Flat	platform		18:10	20:10			Tung 1/8	7205
Jan 27/90	Flat.	platform		17:10	19:10			Tung 1/8	7203

Spectr. Temp. ..... Dome Temp./Hum. 0°C 77.5% Transparency Conditions .. Semi cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3,6,12,20,30		2168 V=361	GO III	B-V=+0.58							
0,15,20,30,40,5,15			KO	B-V=+1.01					where's end of Role? decided to stop beforehand.		
B/A ≤5 ≤5	Room lights off. When "On," dark signal / Note									>10 mAs B. Feb 1/90 - All JAN 24/25 Tests on / roll were blank? Camera messed up? Tm	
1500/25				PES/RC	1800/ 63°.0	BS	λ= 6640Å	IIA		ND=2.0+0.3	
1750/?				"	"	"	"	"		"	

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sun - mon pg#1

Date 1990 JAN 28/29 Observers SAS - TM

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
•SAS SP002762	FLAT			16 19	17:45	0h 0	platform	TUNG 48	5/40
63	Comp			17:59	18:02			FeA Clear	200s
64	V471 Tau	03h 44.8	+16° 57	18:13.5	18:33.5	01 01E	+17° 16		1200s
65	V471 Tau	"	"	18:34	18:54	0 41E	"		1200s
66	Comp			18:55				FeA clear	200s
67	V471 Tau	03h 44.8	+16° 57	19:00	19:20	0h 15E			1200
68	V471 Tau	"	"	19:22	19:42	0007W			1200
69	Comp							FeA Clear	
70	V471 TAU	03 44.8	+16 57	1949.5	20:09.5	00 35W			1200
71	V 471 Tau	"	"	20:12	20:32	00 57W			1200
72	Comp			20:33				FeA clear	200
73	V471 Tau	03h 44.8	+16° 57	20:37.5	20:57.5	01 23W			1200s
74	V471 Tau	"	"	20:58	21:18	01 43W			1200s
75	Comp			21:19				FeA Clear	200
76	V471 Tau	03h 44.8	+16° 57	21:23.5	21 43.3	02 08W			1200

Spectr. Temp. ..... Dome Temp./Hum. +18°C / H = 49.4% Transparency Conditions ... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Dome opened - Runs bottom by 17:50.

Exp. Mtr. B A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
700/30				PCS Red Coll	1800/ 63°.0	BS	λ = 6600 Å	IA	Mki prgm	ND. 2.0 + 0.3	
240/10								IA		No N.D.	
200/10		9.5	KOV					IA		Light baffle not on	
200/10		"	"					IA			
240/10								IA			
180/10		9.5	KOV					IA			
220/10		9.5	"					IA			
220/10								IA			
~~180~~/8		9.5	KOV					IA			
160/		"	"					IA			
240/10								IA			
150/8		9.5	KOV					IA			
150/8		"	"					IA			
230/10								IA			
140/8		9.5	KOV					IA			

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Emulsion Batches:

Date 1990. JAN. 28/29.. Observers J. n / SHS ... + Someiki

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
77	V471 TAU	03 44·8	+16 57	21 46·5	22 06·5	0230 W	+17° 16		1200s
78	Comp						No ND	Fe Ar Clear	200s
79	V471 THU	03 44s	+16 57	2211·8	22 31·8	0256W			1200
80	"	"	"	2234	22:52	0316W			1100
81	Comp			22:53.5					200s
82	Flat			2344	0144.00		platform	TUNG	7200

Spectr. Temp. ..... Dome Temp./Hum. -1.6°C/58.5% Transparency Conditions ..Fine - cloudy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. B/A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	Baffle P.H.	Program	Remarks	Quality
160 / 8		V ≈ 9.5	KOV	PCS Red Coll	1.800/ 63.0°	BS	6600Å	IA	mki-pgm		
230/10				"	"	"		IA			
150 / 8		V 9.5	KOV	"	"	"	6600Å	IA	mki pgm		
120/ 5		"	"	"	"	"	"	IA	"	Halted due to cloud	
230/ 10								IA			
1680/ 20								IA		ND 2.0+0.3	
				Put sky baffle back in place at close up time written							
				Backed up to end of night.							

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Date 1990 Jan 29/30 Mon/Tue Observers Fds/SAS

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0	Prompted Flat	Taken at different settings: 4567Å λ.						Tung	
1	Comp							Th-Ar	10s
2	HD 120315 η uma	$13^h 43.5$	+49 49	2:31.5	03:01.				
3	Comp							Th-Ar	10s
4	HD 120315 "	"	"	03:04.	03:34				
5	Comp			03:35				Th-Ar	10s
6	HD 120315 "	"	"	03:36.5	04:00.5				
7	Comp							Th-Ar	10s
8	HD 120315 "	"	"	04:04	04:30	$0^h 55$ E	+49° 25		
9	Comp			04:31				Th-Ar	10s
10	HD 120315 η Uma	"	"	04:33	4:54.5				
11	Comp			04:55				Th-Ar	10s
12	HD 120315 η UMa	"	"	04:56	05 17.5	$00^h 08$ E			
13	Comp			05:18		~~00h 08~~ W		Th-Ar	10s
14	HD 120315 η UMa	"	"	05:19.5	05:35.5				

Spectr. Temp. ..... Dome Temp./Hum. −2°/81% Transparency Conditions ... Clear .....
(snow until 23h)

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	~~Grating~~/ Tilt	Slit	Emulsion ~~P.H.~~ grat	~~P.H.~~ cicer	Program	Remarks	Quality
				Echelle/ Reticon					Fds prgm	(different λ setting)	
										Dewar tilt 2°.5	1470
7000	horrible	1.86	B3V		18.41	w=400 μm w=150 μm	λ=4481 .49515	127		slit width = .241	2596
											1464
8500	not as horrible	1.86	B3V								2785
											1408
10 000	" Back.	"	"								2761
											1393
12191	getting better	"	"								3315
											1424
10 000	OK	"	"								2733
											1389
11000	good	"	"								2835
											1359
12 000	good										2605

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P2 Mon/Tue

Date 1990 Jan 29/30 Observers Fds/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
15	Comp			5:36				Th-Ar	10s
16	HD120315 η UMa	13h 43.5	+49° 49	5:37.5	5:57.5	0h 30 W			
17	Comp			5:58.5				Th-Ar	10s
18	Comp			6:07.5				Th-Ar	10s
19	HD 120315	"	"	6:08	6:25				
20	Comp			6:26				Th-Ar	10s
21	HD 120315	"	"	6:27	6:51				
22	Comp			6:53					10s
23-26	4 flats @ 40s	2696, 2644, 2725, 2668							
27-30	4 flats @ 30s	2373, 2367, 2325, 2345							
31-34	4 flats @ 60s	3422, 3497, 3547, 3548							

Telescope moved during this exp

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	18.41	H400 W150	λ=4481 0.49515	127	FDS Prgm	dewar fill 2°5	1332
15 000	good	1.86	B3V							slit width = .241	3246
										Topped up dewar	1310
											1300
15000		"	"								2387
											1318
20000		"	"								3539
											1315

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Tue/Wed

Date 1990 Jan. 30/31 Observers Fds/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0	Prompted flat			20:46.5				Eng.	30s
1	comp			20:56				Th-Ar	10s
2	HD 44743 βCMa	6h 18m 18s	-17°54m	20:58	21:11				
3	comp			21:12				Th-Ar	10s
4	HD44743 βCMa	"	"	21:13	21:29				
5	Comp			21:29.5				Th-Ar	10s
6	HD44743 β CMa	"	"	21:30.5	21:50	0h 09 E			
7	Comp			21:51				Th Ar	10s
8	HD44743 βCMa	"	"	21:51.5	22:23	~~00~~ 24 W ~~09~~	-17°55		
9	Comp							Th-Ar	10s
10	HD44743 βCMa	"	"	22:24.5	22:43	00 42 W ~~09 42 W~~			
11	comp			22:43.5				Th-Ar	10s
12	HD44743 βCMa			22:44	23:19	01:20 W			
13	comp							Th-Ar	10s
	4 flats @ 8s	549, 543, 541, 533							
	4 flats @ 15s	964, 954, 956, 926							

Spectr. Temp. ..... Dome Temp./Hum. 0°/72%. Transparency Conditions ... Var. Cloud 1946

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	~~Grating~~/ Tilt	Slit	~~Emulsion~~ X Grating	~~P.H.~~ CAMER	Program	Remarks	Quality
				Echelle/ Reticon	17.62	105um = .259	λ=4567 Å e4892	125	Fds prgm	dewar tilt = 2°.5	1667
											1905
3500	not bad	V 1.9	B1 II							Strong 248	534
											1953
6000		"	"								915
											2039
7000		"	"								1002
											2053
7000		"	"							2-45 ~~not taken~~ Cloudy/closing 1st 15min	937
											2016
7000											949
											2011
4704										Closed, RA Limit	521
											1963
										Topped down @ 23:50 T=0.181	

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P2 Tue/Wed

Date 1990 Jan 30/31 Observers FDS/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
22	Comp			23:56.5				Th-Ar	10S
23	HD120315 η UMa	13h 43.5	+49° 49	00h 08.5	0h 30		· 49 24		
24	Comp			00:31				Th-Ar	10S
25	HD120315 η UMa	"	"	00:31.5	00:54.5				
26	Comp			00:55				Th-Ar	10S
27	HD 120315	"	"	00:56	01:15	04 10 E			
28	Comp			01:16				Th-Ar	10S
29	HD120315	"	"	01:17	01:43				
30	Comp			01:44				Th-Ar	10S
31	HD 120315	"	"	01:45	02:14.5				
32	Comp			02:15				Th-Ar	10S
33	HD 120315	"	"	02:16	02:42				
34	Comp			02:43				Th-Ar	10S
35	HD 120315	"	"	02:44	03:14.5	02 10 E			
36	Comp							Th-Ar	10S

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	~~Grating~~/ Tilt	Slit	Emulsion	~~P.H.~~ Order	Program	Remarks	Quality
				Echelle/ Reticon	18.45	150 μm = .241	λ = 4481 Å .49512	127	FOS prgm	new settings!!	1343
1000		1.86	B3E							device tilt 2.5	2459
VR											1364
1200		"	"								2885
											1302
12038		"	"								2715
											1324
1500		"	"								3340
											1253
15000		"	"								3275
											1232
15000		"	"								3356
											1316
14476		"	"								2998
											1296

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P3

Tue/Wed

Date 1990 Jan 30/31 Observers Fds/SAS

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
37	HD 120315 ηUMa	13h 43.5	+49° 49	03:17	03:48				
38	Comp			03:49				Th-Ar	10s
39	HD 120315 ηUMa	"	"	03:50	04:24.	01:00 E			
40	comp			04.24.				Th-Ar	10s
41	HD 120315 ηUMa			04:25	4:52.5				
42	Comp			04:53				Th-Ar	10s
43-46	4 plates @ 53	3311, 3288, 3393, 3272							
47-50	4 plates @ 53	3272, 3302, 3037, 3025.							
51-54	4 plates @ 47	2710, 2740, 2720, 2746.							

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions . Some..Scattered. Cloud..... 198

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ...-2../..82%

high cirrus rolled in ≈ 9:00

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
15000		1.86	B3 V	Echelle/ Reticon	18.45	150μm = .241	λ = 4481Å 049512	127	Fds prgm		3164
											1304
15000		"	"								3162
											1329
15000		"	"								2754
										Topped up after measure	1286

199

Wed/Thur

Date 1990 Jan/Feb. 31/1 Observers FdS./SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0	Prompted flat			~~17:41~~					
1	Sun / δ Per			17:49	17:55				
2	Comp			17:56				Th-Ar	10s
3	HD 22928 δ Per	3h 35.8	+47° 28	17:58	18:40	00 36 E	-47 50		
4	Comp			18:41.5					10s
5-8	4 Flats @ 58s	3033, 2995, 2988, 3067.							
9	Comp			19:10				Th-Ar	10s
10	HD 44743 β CMa	6h 18 18	-17° 54	19:15	20:05				
11	Comp			20:06				Th-Ar	10s
12	HD 44743 β CMa	6 18 18	-17° 54	20:07.5	20.42	01 13 E			
13	Comp			20 42.5					10s
14	HD 44743 β CMa	6 18 18	-17° 54	20:44	21:11	00 45 E	-17 55		
15	Comp			21:11.5					10s
16	HD 44743 β CMa	6 18 18	-17° 54	21:12	21:25.5	00 30 E			
17	Comp			21:26					

Spectr. Temp. ..... Dome Temp./Hum. -1°/69%.. Transparency Conditions . Some Cirrus.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	~~Grating~~/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	18.45	150μm .241	λ=4481Å .49512	127	FDS Prgm	dewar tilt 2°.5	3798
4000											950
		3.01	B5III								1304
15200											3369
											1306
										T=+0.183 Tipped Dewar @1854	
					17.62	105μm .254	λ=4567 .4890	124		dewar tilt 2°.5	2081
4100		V 1.9	B1III								762
											2092
7000		"	"								1274
											2056
6000		"	"								1001
											2110
6000											1140
											2112

20/32

Wed/Thur

Date 1990 Jan/Feb 31/1 Observers Fds/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
18	HD 44743 βCMa	6h 18 18	-17 54	21:26.5	21:43	00 13 E			
19	comp		~~21:44~~	21:44				Th-Ar	10s
20	HD 44743 βCMa	6h 18 18	~~-17 54 21:49.5~~	21 44.5 ~~22:13.5~~	22:13.5	00 18 W			
21	comp		~~22:14~~	22:14				Th-Ar	10s
22	HD 44743 βCMa	6h 18 18	-17 54 ~~22:15~~	22:15	22.36	00 40 W			
23	comp			22.37				Th-Ar	10
24	HD 44 743 βCMa	6h 18 18	-17 54	22:38	23:09	01 14 W			
25	comp			23 10				Th-Ar	10
26-29	4 flats @ 16s	1026, 1029, 105, 997							
30	Comp			23:32.5				Th-Ar	10s
31	HD 120315 η UMa	13h 43.5	+49° 49	23:36	0:03				
32	Comp			0:03.5				Th-Ar	10s
33	HD 120315 η UMa	"	"	0:06	0:36				
34	Comp			0:37				Th-Ar	10s
35	HD 120315 η UMa	"	"	0:38	01:05		+49 14		

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. some cirrus .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
6000	ok	1.91	B1 II	Echelle/ Reticon					F2s prgm		954
											2104
6500		"								Cloud at beginning	1132
											2164
6500		"	"								1027
											2047
6500		"	"								1087
											2155
										Topped dewar @ 23:18	T=.193
					18.45	160μm =.241	λ=4481Å 049512	127		New settings	1539
12000		1.86	B3 V								3457
											1467
12022		"	"								3031
											1393
		"	"								3022

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Wed / Thu

Date 1990 Jan/Feb 31/1 Observers FDS / SAS

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
36	Comp			01:05.5					10s
	~~Wavelength~~								
37-40	4 flats @ 54s	3025, 3088, 3123, 3147							

Spectr.
Focus
Spectr.
Exp Mu

Spectr. Temp. ..... Dome Temp./Hum. -3/84% Transparency Conditions Fog + high clouds 204

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											1416

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Sun/Mon

Date 1990 Feb 4/5 Observers SAS/Tn./KK

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SAS SP00 2785	Flat	at platform				0h		Tung A=1/8	1850
86	Comp			18:20				FeA clear	200
Hartmann R	χ ER:	03 57.6 (1990.5)	−13 32	≈1925		00 18 W	−13 31	10,20,20,40	
S	ζ And	00 07.9	+29 02		19 43	04 18 W		10,10,20,20,40	
T	ε Aur	05 01.7	+43 49		19 55	00 25 E		10,10,20,20,40	
U	i UMa	03 56	+48 05		20 10	04 07 E		1,20,40	
	ε UMa	12h 53.6	+56° 01	20 18	20 20	07 53 E		5, 2x10, 2x20	
V	ζ Hyd	8h 54 53	+5° 59	≈20:27	20:31	03 40 E		10, 20, 20, 40	
87	Flat	at platform			00:02			Tung 1/8	60 sec
	Note, From previous Day (no Observing though) 2 written frames								
	FLAT SP00 2783.SAS						ND 2.0+0.3	Tung 1/8	
	DARK SP00 2784.SAS								
88	Comp (weak?)	RA 00h 54	Dec 64° 00		00:34			FeA clear	300 s
89	Comp			0h 51	0:53			FeA clear	300 s
90	HD 65583	7h 54.3	+29° 31	01:07	01:27	2h 08 W			1200 s

Spectr. Temp. ..... Dome Temp./Hum. -5/70% Transparency Conditions Clear.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Funs on: Dome opened @ 18hrs
Low cloud fast moving from NNW
Medium Breeze NNW

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B/A 1150/				PCS Red Coll	1800/ 63°.0	BS	λ=6600Å	IA	written	Funs turned on ND 2.0 +0.3 filling Flat	
150/20								IH	written	no ND of course	
40		2.95	D105				TP on Film				
40		2.06	B9							thin cloud	40 good
40, 40		2.99	F0							thin cloud	should be 60
		3/4	A7 IV								60° st. wks
		1.77	A0p							thin cloud	too weak
+4x4'		3.11	G9 III								40° weak
				PCS						ND 2.0+0.3	
1150/											
40/				PCS	1800/ 63°	BS	λ=6600Å	IA		telescope was "reversed" too much cloud to do f/8 obs	
90/								IA			
750/25		7.00	d67					IA	Stvel		

207 pg#2

Date 1990 Feb. 4/5 Sun/Mon Observers SAS/TA

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
91	Comp			1:28				Fe-A clear	300
92	HD90861	10 24.3	29 05	01:40	01:50	00h 03 W	+28° 40		600s
FM 233 SAS	HD90861 Seeing Test	"	"	~01:54	"			Int x 4	
93	Comp			01:59				Fe A clear	300
94	Flat							Tung 110	7200
	Sheet data backed up + sent to Centaur								
2796	Hartmann tests								
2797									

Spectr.
Focus
Spectr.
Exp. Mu
6:/15
8:/2
3(x3)
9:/15
Ex/2

Spectr. Temp. ..... Dome Temp./Hum. ~8.5°C 177.3% Transparency Conditions .. Var... Cloud.: .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ...8./...+78%

Opened again at ~0 hrs Funs Turned on again

Cloud by 02 = H = 99% on actual IR

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
90/15				PCS/RC	18000/ 63°	BS	λ=6600Å	IA			
800/20		V 7.2	K2III					IA	Std vel		
31x31 pixels		"	"	4 Frames					" "	int x 4 = 4/60 sec	
90/15								IA		Labelled HD90861...	
800/20										ND 2.0+0.3	

209 pg #1

Mon/Tues

Date 1990 Feb 5/6 Observers SAS/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0	Flat prompted			18:42				TUNG	
1	Comp			18.43				Th-Ar	10s
2	HD22928 δPer	3h 35.8	+47° 28	18:46	19 42	0 46 W	+47 49		
3	Comp							Th-Ar	10sec
4	HD22928 δPer	3 35.8	+47 28	19 46	20:36	1h 40 W			
5	Comp			20:37				Th-Ar	10s
6	HD22928 δPer	"	"	20:39	21:21	2 25W			
7	Comp			21:22				Th-Ar	10s
8	HD22928 δPer	"	"	21:25	22:20	03 25W	+47 48		
9	Comp			22:21				Th-Ar	10s
10-13	Flats x 4			2237		01 34W	+47 48	TUNG	35s
14-17	Flats x 4								20s
18	Comp							Th-Ar	10s
19	HD120315 ηUMa	13h 43.5	+49° 49	00:32	01:11				
20	Comp			01:12				Th-Ar	10s

Spectr. Temp. ..... Dome Temp./Hum. -2/85% Transparency Conditions Partly cloudy .....

Focus ..... wind from SW

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion X Grat	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	18.45	15μm :241	λ=4481Å 04961	127	Fds. prgm		540
										T=.19 dewar topped up 18:30	1219
11,150		3.01	B5III							Some cloud	1803
1090											1206
9260		3.01	B5III								1717
											1262
5380		11	"							getting cloudy	1016
											1182
4866		"	"								946
											1195
1825, 1735, 1748, 1751										Top up @ 22:33 T=+.160	
989, 979, 977, 995											
											1419
12000	bad	1.86	B3V							Light cirrus	2254
[redacted]											1467

211 pg #2 Mon/Tue

Date 1990 Feb 5/6 Observers SAS/TA

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
21	HD 120315 η UMa	13h 43.5	+49° 49	01:13	01:55		+49 24		
22	Comp			01:56				Th-Ar	10s
23	HD 120315 η UMa	"	"	01:58	02:25	02h 35 E			
24	Comp			02:28				Th-Ar	10s
25	HD 120315 η UMa	"	"	02:28.5	02:54.5	02h 06 E			
26	Comp			02:55				Th-Ar	10s
27	HD 120315 η UMa	"	"	02:56	03 20	E			
28	Comp							Th-Ar	10s
29	HD 120315 η UMa	"	"	03 21.6	04:00.5				
30	Comp			04:01				Th-Ar	10s
31	Comp			04.07				Th Ar	10s
32	HD 120315 η UMa	"	"	04:09.5	04:49.5				
33	Comp			04:50				Th Ar	10s
34	HD 120315 η UMa	"	"	04:51	05:19				
35	Comp			05:19.5				Th-Ar	10s

Spectr. Temp. ..... Dome Temp./Hum. −1°C H=90.7% Transparency Conditions ....light....Cirrus..... 24

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

It's warming up tonight.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion × hrs	P.H. order	Program	Remarks	Quality
15000	~~E~~	1.86	B3V	echelle/ Reticon	18.45	150μm .241	λ=4481Å 04961	127	Fds prgm		3016
											1395
15000		"	"								3017
											1377
15000		"	"								3035
											1377
15000		"	"							T=+0.171 Dome T=-1.0°	2877
											1387
16000		"	"							some cloud	3105
										Topped Dome @ 4:02 T=+0.168	1293
											1235
15000		"	"								2942
											1196
16000		"	"								2873
											1183

213 P3

Date 1990. Feb. 5/6. Mon/Tue Observers SAS/TA

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
36	HD120315 η UMa	13h 43s	+49° 49	05:20	05:37	0h 37 W			
37	Comp			05:39				TrAr	10s
	Flats	4@ 47s	2971,	2943,	2923,	2932			
	Flats	4@ 37s	2294,	2280,	2279,	2292			
	Flats	4@ 21s	1306,	1303,	1299,	1302			

Data (Ret.dat) backed up to 5¼" floppy

Repacked: files Febo590.DAT ; Hfebo590.dat

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
6488		1.86	B3V	Echelle/ Kehcon	18.45	150μm .241	λ= 4481Å .4961 (X GRAT)	127	fds pgm	Cloud!	1208
											1245
										telescope at platform for flats	

215

Wed/Thur

Date 1990 Feb 7/8 Observers SAS/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ø	Prompted Flat			18:20				Tung	40s
1	Comp			18:21				Th-Ar	10s
2	HD 22928 δ Per	3h 35.8	+47° 28	18:25	19:15	2 14 W			
3	Comp			19:16				Th Ar	10s
4	HD 22928 δ Per	"	"	19:17 ✓	20:09	1h 20 W ~~1h 40W~~			
5	Comp			20:10				Th Ar	10s
6	HD 22928 δ Per	"	"	20:11	21:09 ✓	2h 20 W ~~2h 39 W~~	+47° 48		
7	Comp							Th-Ar	10s
8	HD 22928 δ Per	"	"	21:10.5	22:01 ✓	✓ 03h 13 W			
9	Comp			22:02		~~0[illegible]~~			
~~10~~	~~HD 22928 δ Per~~			~~22:03~~					
10-13	Flats		4@33s	2245, 2224, 2178, 2223					
14-17	Flats		4@42s	2706, 2689, 2724, 2719					

Spectr. Temp. ..... Dome Temp./Hum. 2°/83%. Transparency Conditions Hazy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 0°/88%.. Fog, thick cirrus @ 22:00

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion × GRAT	P.H. order	Program	Remarks	Quality
·				Echelle/ Reticon	18.45	150μm .241	λ = 4481 Å ~~#6 II~~ ↑ prob .4961	127	Fds prgm	Topped dewar @ 1800	2373
											1303
15000		3.01	B5 III								2621
											1270
14800		"	"								2791
~~18800~~											1197
15000		"	"								2832
"											1259
13200		"	"								2239
											1186
										Stopped due to cloud	

Mike Note: Somehow we managed to mess up some of the time & HA entries. Based on calculations the HA for #4 + #6 are OS corrected, assuming ending time is correct. I believe the start time to #6 is really 20:11 not 20:21. Better check these out when you look at the data. — I just looked at header file — 20:11 for start of #6 is correct

217 pg #1 Thurs-Fri

Date 1990 Feb 8/9 Observers Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP002798.TN	FLAT at Start			17 21	18 36	/	Platform to Raising	TUNG A=1/8	4470
99	Comp				18 44			Fe-Ar A clear	200
2500.TN	HD 22484	03 31.8	+00 05	18 58.6	19 16	W	+00 24		1040
01	Comp							Fe Ar Clear	
02	HD 22484			19 21.8	19 25.1	00 46 W			200
03	Comp			19 27				Fe Ar Clear	200
04	HD 22484			19 40.6	19 45.6	W			300
05	"			19 48.0	19 51.0	01 12 W			300
06	Comp			19 53				Fe Ar Clear	200
07	Flat			20 19	21 24	Halted early		TUNG A=1/3	7200
08	Comp			21 25				Fe Ar Clear	200
09	HD 26162	04 03 35	+19 21	21 32	21 37	W	+	Fe Ar A clear	300
10	Comp								200
11	HD 26162	04 03 33	+19 21	21 56	22 02	W			300
12	"	"	"	22 07.4	22 07.4				300

Spectr. Temp. ..... Dome Temp./Hum. +5.5C / 77% H Transparency Conditions .. Getting cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Done on MK IV RC

Exp. Mtr. B A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1800/35	NO = 2.0+0.2			PCS/RC	1800/63°	BS	6560	IA	Note comets in	H. Hal early "B" with ND 2.0+0.3 = 1200	
	no ND for comparisons of course							IA			
10-500/		4.28 ✓	F8 ✓	(mostly in medium	cloud)			IA	stellvel	H. Hal early @ 1040	
170/								IA			
500-1600/								IA	stellvel	H. Hal @ 1200 secs semi thick cloud	
140/								IA			
600-1900/								IA	stellvel	H. faint cloud	
(500→3000)								IH	"	H. Hal at 1774 secs variable cloud	
190/20								IA			
1850/38	NO = 2.0+0.2							IA			
200/20								IA			
600-1200/		5.50 ✓	K III					IA	stellvel		
2.20/20								IA			
350-1500/35								IA	stellvel	H. faint cloud	
Same								IA	"	" "	

219 #2

Emulsion Batches: .....

Date .1920. Feb. 8/9..... Observers .J.H.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
13	HD 26162	04 08.4	+19 34	22 09.1	22 14.1	03 04 W	+19 38		300
14	Comp							Fe Ar Clear	
15	HD 26162	04 08.4	+19 34	22 28.6		W			300
16	"	"	"	22 34.4	22 39.4	W			300
17	Comp							Fe Ar Clear	200
18	HD 26162	04 08.4	+19 34	22 45.4	22 50.4	W			300
19	"	"	"	22 52.4	22 57.4	03 47 W			300
7820.TN	Comp								200

Spectr. Temp. ..... Dome Temp./Hum. +55°C 74% Transparency Conditions PART v mostly cloudy 220

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. B · A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1400								IH	std vel		
190/20								IA			
(1500-500)								IH	std vel	VGR cloud	
(1000-2500)								IH	"	scan; clear	
200/20								IA			
(600-1500)								IA	std vel	var cloud	
2000/40								IA	"	clearing	
190 15								IA			
		All backed up on Floppy. ORIGINAL in "Shack" on mt									

221 pg#1 SAT-SUN

Date 1990 Feb 10/11 Observers J.n. (mk: checking on me)

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP0031.TN2	Comp			18 12		01 47 W	-0025	Fe-Ar clear	200
2822	HD 8779	01 21.4	-00 55	18 21.4	18 26.4	02 05 W	"		300
2823	"	"	"	18 29.0	18 34.0	02 13 W	"		300
2824	Comp								200
2825	HD 8779	01 21.4	-00 55	18 42.0	18 47.0				300
26	"	"	"	18 52.3	18 57.3				300
27	Comp								200
28	HD 26162	04 03.3	+19 21	19 10.0	19 15.0	00 12 W	+1937		200
29	"	"	"	19 17.4	19 22.4	00 19 W			300
30	Comp								200
SP0283.TN2	HD 26162	04 03.3	+19 21	19 30.5	19 35.5	00 32 W			300
32	"	"	"	19 40.0	19 44.9	00 42 W			300
33	Comp								200
34	HD 65583	07 54.3	+29 31	20 07.0	20 13.7	12 40 E	+		400
35	Comp								

Spectr. Temp. ..... Dome Temp./Hum. -00.2 / H 44.8% Transparency Conditions Clear.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Windy from N W
Fans on & open @ 18hrs

Exp. Mtr. B / A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
180 / 18				PCS Ref Coll	1800/65°	BS	* 6560Å	IA		Sky @ 18hrs ~ 35 arcsec "B"	
1000 / 25	poor	V 6.41	gK0					IA	stdvel	≈ 100 cts/pix max in vel ft	
1000 / 25								IA	"	cuts to 1300 barely	
190 / 20								IA		* Actual λ center is 6650Å	
1200 / 25								IA		cuts to 1500/sec	
1700 / 20											
180 18											
(3000 (B) 4000)		V 5.50	K III						stdvel	too bright for B only (signal too high for cuts)	
* (800 - 3000)		"	"						"	* ND 0.1 added in beam	
130 20		—	—							~~ND 0.1~~	
1200 - 2800		V 5.50	K1 III							ND 0.1	
* 1500 - 3000		"	"	* note: cuts briefly to 4000/sec; guider slightly off if anything						ND 0.1	
180 20											
500 - 750		V 7.0	dG7	[RA, dec on border of Arcturus star]					stdvel	* 400-600 with ND = 0.1 ND 0.1 removed	
170 / 15											

223 #2

Emulsion Batches: .....

Date 1990 Feb 10/11 Observers T.T. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
36	HD65583	07 54.3	+29 31	20 22.0	20 28.7	0225 E	+29 17		400
37	"	"	"	20 29.7	20 36.4				400
38	Comp							Fe-Ar Clear	200
39	BM Class	00 48.6	+63 33	20 51.6	21 11.6	0524 W	Reversed +6301		1200
40	Comp								200
41	BM Class	00 48.6	+63 33	21 19.8	21 39.8	W			1200
42	Comp								200
43	BM Class	00 48.6	+63 33	21 47.0	22 07.0	W			1200
44	Comp								200
45	HD26162	04 03.3	+19 21	22 20.0	22 25.0	W	Unreversed +		300
46	Comp								200
2847IN2	HD26162	04 03.3	+19 21	22 32.6	22 37.6	W			300
48	"	"	"	22 41.6	22 46.6	W			300
49	"	"	"	22 48.7	22 53.7	W			300
50	"	"	"	22 56.7	23 01.7	W			300
6									

Spectr. Temp. ..... Dome Temp./Hum. -18°C / H-51.6 % Transparency Conditions Photometric now .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	~~Dtg. Mag.~~	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
B/A											
~~500-800~~		✓ 7.00	dG7	PCS Rel Coll	1800/63°	BS	6650Å	II	std vel		
700-750								IA			
180 20											
100-250)		✓ 8.8-9.3							Obs pgm		
160 20											
130 250											
70 17											
200 10											
160 12											
1500-2800		✓ 5.50	KIII						std vel	ND 0.1 in beam	
~~1500-2800~~											
1400-2900									std vel	ND 0.1 in	
1500-2700									"	ND 0.1 in std	
1400-2800									"	ND 0.1 in	
"										ND 0.1 in stellar beam shift	

225 #3

Emulsion Batches: .....

Date 1990 Feb 10/11 ... Observers T.H. ....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
51	Comp							Fe-Ar Clear	200
52	HD 26462	04 033	+19 21	23 11.0	23 16.0	04 14 W	+19 37		300
53	"	"	"	23 20.0		W			
54	Comp							Fe Ar	200
	HD 66141	07h 57m.1	+ 2° 36'	23 46.0	23:51				300
	HD 66141			23:52	23:57				"
	HD 66141			23:58	00 03				"
	HD 66141			00 05.3	00 10.3	01 14 W			"
	Comp								200
2660TN2	HD 103095	11 47.2	+38 26	00 24.2	00 29.2	E			300
	"	"	"	00 31.5	00 36.5	02 10 E			300
	"	"	"	00 39.3	00 44.5	E	+37 49		300
	"	"	"	00 46.0	00 51.0	E			300
	Comp							Fe A Clear	200
	HD 90861	10 24.3	+29 05	01 02.1	01 07.1	00 15 E	+28 39		300

Spectr. Temp. ..... Dome Temp./Hum. −3.0°C / 60%H Transparency Conditions Mostly clear.....

Focus ....., ...

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. B/A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
180 20				PCS Red Coll	1800/65°	BS	6650Å	IIa			
2000-3000		V 5.50	K1 III						std vel	ND removed from beam	
2000-3000		"	"						"		
190 20											
1700 30		V 4.39	K2 III							ND = 0.6 in beam	
1700 30											
1600 35											
1000 30		V 6.45	G8V p						std vel	No ND in Beam Vel = −99 km/sec	
"										cnts to 1500	
"											
"											
1100 25											
1000 20		V 7.2	K2 III						std vel	Bright star in FOV	
									there is a	route to star to SW	

227

#4

Emulsion Batches:

Date 1990 Feb 10/11/90 Observers MKI - TG

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
	HD90861	10 24.3	+2905	01 11.5	01 16.5				300
	"	"	"	01 17.4	01 22.4				300
2868, TN2	"	"	"	01 24.6	01 31.6	0008W	~~0008W~~		300
69	Comp								200
70	SKY near HD90861			01 38.5	01 43.5	0019W	+2837		300
71	Comp							FeAr Clear	200
~~72~~	HD107328	12 15.3	+0353	01 58.5	02 03.5	E			300
73	"	"	"	02 06.8	02 11.8				300
74	"	"	"	02 12.6	02 17.6				300
75	"	"	"	02 20.1	02 25.1	0046E			300
76	Comp								200
77	HD123782	14 04.6	+19 56	02 38	02 43	E			300
78	"	"	"	02 45.5	02 50.5	E			300
79	"	"	"	02 51.3	02 56.3				300
80	"	"	"	02 56.8	03 01.8	0200E			300

Spectr. Temp. ..... Dome Temp./Hum. -3.8°C/66% Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Full Moon

Exp. Mtr. B / A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		V 7.2	K2 III					JH	stdvel	Fld drawn	
										Cstvel = +36 km/sec	
1000 25											
180 20											
10 10											
170 15											
1100 / 30		V 4.96	K1 III						stdvel	ND = 0.6 in beam Cstvel = +35.7 ± 0.3	
"											
"											
"											
160 30											
1300 30		V 5.25	M2						stdvel	ND = 0.6 in beam	
1300 30										"	
1300 25										"	
1200 20										"	

229 #5

Emulsion Batches:

Date 1990 Feb 10/11 Observers Mai - Ty

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
81	Comp							FeAr Clear	200
82	HD144579	16 01.5	+39 24	03 13.2	03 18.2	E			300
83	"	"	"	03 20.4	03 30.4				600
84	"	"	"	03 31.0	03 36.0				300
85	"	"	"	03 37.7	03 42.7	03 15 E			300
86	Comp								200
28 87.IN2	HD 145001	16 03.6	+17 19	03 53	03 58	E			300
88	"	"	"	03 59.2	04 04.2				300
89	"	"	"	04 07.2	04 12.2				300
90	"	"	"	04 13.8	04 18.8	02 42E			300
91	Comp							FeAr Clear	200
92	HD103095	11 47.2	+38 26	04 34.2	04 39.2	W			300
93	"	"	"	04 40.0	04 45.0				300
94	"	"	"	04 46.0	04 51.0				300
95	"	"	"	04 51.6	04 56.6				300

Spectr. Temp. ..... Dome Temp./Hum. -47°C / 68% Transparency Conditions . some cloud .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B/A							6650Å	JA	st.	~~No obs~~	
500-1100		V 666	G8						std vel	No ND	
200→1000										some cloud	
900/18											
"											
1000 25		V 5.00	G8II						std vel	NP=0.6 m B+one of pair	
900 35											
1000 30											
800 20											
1300 30		V 6.45	G8Vp						std vel		
900 20											
800 20											
900 20										Cloud at end	

231 #6

Emulsion Batches:

Date 1990 Feb 10/11 Observers Inki-Tu

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2096-TNZ	Comp at end							Fe Ar Clear	200
97.	Flat at end	on Timer		05/6		0 0	platform	Tung A-1/8	720

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Clouded in

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -5°C / 73%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1600/45	NO	20+0.2									
					Backed up on 3½" To 2846.1Å						

233 pg #1

Sun - mon

Date 1990 Feb 11/12 ... Observers T.n. ..... mtg checking by phone

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
98	Flat at start			~~17~~ 45.8	18 25.6			TuNG A=1/8	secs 2350
99	Comp			18 29				FeAr Clear	200
2900.TN2	HD 8779	01 21.4	-00 55	18 33.5	18 38.5	0 22 W	-00 25		300
1	"	"	"	18 42.3	18 47.3				300
2	"	"	"	18 49.5	18 54.5				300
3	"	"	"	18 55.8	19 00.9				300
4	Comp								200
5	HD 26162	04 03.3	+19 21	19 12.9	19 17.9	00 18 W			300
6	"	"	"	19 19.8	19 24.8	00 26 W			300
7	"	"	"	19 25.5	19 30.5	00 31 W			300
8	"	"	"	19 31.7	19 36.7				300
9	Comp							FeAr Clear	200
10	BM Cass	00 48.6	+63 33	20 03	20 15.6	4 32 W	Reversed +64 02	762sec	~~1200~~
2911.TN2	Comp							FeAr Clear	200
2912	HD 66141	07 57.1	+2 36	20 39.0	20 44.0	2 09 E	+2 24		300

Spectr. Temp. ..... Dome Temp./Hum. -1.5°C / H. 63% Transparency Conditions Part. cloudy.....

Focus ..... Fans on & Dome open by 18 hrs

Spectr. Temp. ..... Dome Temp./Hum. ..... SAME setup as Previous night

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
1650 50	NO=2.0+0.2			PCS Red Cell	1800/63°	BS	6650Å	IIa			
180 18											
2200 40		V 6.41	gK0						std vel	no ND in beam	
1400 20									"	thin cloud & seeing change	
1500 30									"	CH'A' out at during exp	
2200 45										cnts to 3300 in clear sky	
170 15											
VAR		V 5.50	K1 III						std vel	(1000-4000) cnts in cloud	—
2200 40											
2500 40											
2400 40										some high cnts > 3500	
160 20											
250 10		V 8.8 -9.3							Obs pgm	cnts to 350/sec Halted, then cloud Pb	
150 15											
2500 50		V 4.39	K2 III						std vel	NO ND in beam + thin cloud	

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#2

Emulsion Batches:

Date 1.9.9.0. Feb. 11/12. Observers T.H.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP002913TN2	HD66141	07 57.1	+2 36	20 48.9	20 53.9	1 58 E	+2 24		300
	"	"	"	20 56.2	21 01.2				300
	"	"	"	21 02.1	21 05.1				300
	Comp							Fe Ar clear	200
	Comp			21 22				"	200
	HD 26162	04 03.3	+19 21	21 29	21 34.0	02 36 W	+19 28		300
2919.TN2	"	"	"	21 34.9	21 39.9				300
20	"	"	"	21 42.2	21 47.2				300
21	"	"	"	21 49.0	21 54.0				300
2922.TN2	Comp								200
23	FLAT			22 09	00 09			TUNG A=1/8	7200

Spectr. Temp. ..... Dome Temp./Hum. -21°C 64% Transparency Conditions ... cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. B A	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1500 40		4-39	K2III	PCS Red Coll	1800/63°	BS	6650Å	IIA	std vel	ND 0.3 in + cloud	
1500 35										ND removed cloudier	
2000* 40										* in and out some cirrus to goods	
180 20											
180 20											
2000 40									std vel	no ND in beam - thin cloud	
2000											
1800											
2000 50											
170 20											
1600 30		IVD	2.0	+0.2							
									Backed up on 3½" to end.		
								+	All back up NES to		
									Centaur DATA\PCS1990		

237

Date 1990 Feb 17/18 Sat/Sun Observers SAS/James DiFrancesco

Emulsion Batches:
5" D19 IIIaJ: e-f-g Feb 14 ... 48hr hyper!

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
50706	HD 112028	12h 48.3	+83° 58	21:13	22:35			FeNe Clear	60-60
50707	HD 62509	7h 39.2	+28 16	23:47	00:18	2h 06 W		"	60-60
50706T	SPOT CAL FOR 50706, 50707		15 min @	17.5 V	D4		3600, 3900,	4300	

Spectr. Temp. 20°F ..... Dome Temp./Hum. -12°/69% Transparency Conditions ... Clear → hazy → cirrus → cloud

Focus ... 399 .....

Spectr. Temp. ..... Dome Temp./Hum. -11°/75%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3700		B 5.28	B8	BC	830/402	BS	IIIaJ-efg	1	Shell-Bln	Diff out / cursnit. 60 sec comp = 1400 counts	weak
30,000	bad	V 1.14	KO IIIb	"	"	"	IIIaJ-efg	1	Std Vel		sl sm. vv
							IIaT-efg			did ultra v. instead of Blue by accident	
										Thick cirrus - closed	
										Plates are labelled #1 and 2.	

239

Date 1990 Feb 18/19 Sun/Mon Observers SAS/J. DiFrancesco

5h D19 Emulsion Batches: IIIaJ-e,f,g Feb 14 48h hyper!

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
50708	HD 29139	4h 30.2	16° 19	19:42	20:14	1h 15 W		Fe Ne clear	D out 60-60
50708	Spot Calib for	50708	15 min D4	3900 (17.5V)	4300 (15V)	4810 (15V)			

Spectr.
Focus
Spectr.
Exp. Mtr.

Spectr. Temp. 28°F Dome Temp./Hum. -2/80% Transparency Conditions Hazy, light cirrus

Focus 397

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
25000	bad	V 0.85	K5III	DC	830/ 40.2	BS	IIIaJ-efg	1	Std Vel	60 sec = 1300 counts	sl. stm.
							IIIaJ-efg				"

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Mon/Tue

Date 1990 Feb 19/20 Observers SAS/J.DiFrancesco

Emulsion Batches: SAS 4"DF IIIaJ: efg ... Feb 14 ... 48" hyper

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
50709	HD112028	$12^h 48.3$	+83° 58	20:20	23:25	3:45 E	+83° 28	FeNe Clear	60-60
50709T	SPOT CALIBRATION	15 min	D4 : 3900 (17.5V), 4300 (15V), 4810 (15V)						
50710	HD112028	$12^h 48.3$	+83° 58	00:45	03:55	$00^h 47$ W	+83° 30	FeNe Clear	60-60-60

Spectr. Temp. 32°F Dome Temp./Hum. -6°/60% Transparency Conditions ...Var. Cloud, windy...
Focus ... ~~B~~ 396 ... -flurries
Spectr. Temp. 26°F (398) ... Dome Temp./Hum. -8°/64%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10000+2200	4-5	B= 5.28	B8	Bc	830/ 40.2	BS	IIIaJ-efg	1	Bln-Shell	Diff ad | clear 2nd half-closed dia 60 sec comp = 1100 to snap sl. wk.	
	~~B~~			~~B~~			IIIaJ-e/g			for 50709, 10	--
12500+12300	3-4	B= 5.28	B8	Bc	830/ 40.2	BS	IIIaJ-efg	1	Bln-Shell	60 sec = 800 counts	fair

243

Tue/Wed

Date 1990 Feb 20/21 Observers KK/SAS/SC

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
compool.kwk	Comp 2			~17:50				FeNe clear	1200s
capol.~~TAG~~	α Aur (Capella)	1990.5 5h 16	+45 59	19:13	20:31	1h W			
SIRol.~~TAG~~	α CMa (Sirius)	1990.5 6h 44.8	−16 42	~20:43	21:43	0h 45 W			
Flat001.~~Bulk~~	Flat			21:50				Tung 1/2	7000s

Spectr. Temp. ..... Dome Temp./Hum. ~5°/62%. Transparency Conditions . Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
35/35				Speckle	831/ 44°	150μm	4100 Å				
200-500		V .08 V	6GG11							& Mbype	
500-900		-1.46	AO								
10000/15000											

Note blue region is IR contaminated (or IR dominated)
wrong order separation filter used. Should have been $CuSO_4$

Emulsion Batches:

Date 1990 Feb 21/22 Observers KK/SC/SAS

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
COMP002.SUM	Comparison			15:07	15:17			special FeNe	
COMP003.SUM	Comparison			15:25	15:35			"	
FLAT.002.SUM	Flat			15:55					
CAPO2o TAG	α Aur (Capella)	1990.5 5h 16	+45°59	18:30	19:19				
CAPO3o TAG	"	"	"	19:23	19:38				
CAPO4 TAG	"	"	"	19:44	20.07				
CAPO5 TAG	"	"	"	20:08	20:27	1h 00 W			
SIRO2o TAG	α CMa (Sirius)	1990.5 6h 44.8	−16°42	20:40	20:57				
COMP004.SUM	Comparison			21:12	22:12			FeNe Clear	3600s
Flat03.SUM	Flat			22:35	00:35			Tung clear	7200s

Spectr. Temp. ..... Dome Temp./Hum. 12°/46%. Transparency Conditions Hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. 83	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
590/780				Speckle	1800/460?	150μ					
330/250				"	1800/465	150μ	4175 Å PCS	A B			
1000/700											
935	3"-4"	V .08	G6III		NO ordo separation						
1502											
1500											
1000											
	10"										
~15											
1300/900											

247

Date 25/26 Feb 1990 Observers Bagnuolo (GSU), KK, SAS Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CAP006 ~~FAG~~	α Aur	(APM: 5) 5 16	+45 59		19:00				
	26 Feb								
COMP006	comparison								
COMP007	"							special	
FLAT006	flat							FeNe	
								A 1/8 neg	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
300	4"			~~Speckle 1800/52~~	1800/52°	300μ	5200Å			aperture .055" at 35°	
										Dome would not rotate - closed up	
				Speckle	1800/52°	300μ	5200Å				
					"	"	"				
					"	"	"				

249

Emulsion Batches:

Date 1990 Feb 26/27 Observers SAS/Tm/Bagnulo/KK

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CAP07 TAN SUN	α Aur (Capella)	1990.5 5h 16	+45 59	18:31	18:51				
CAP08	"	"	"	19:00	19:31				

Spectr. Temp. ..... Dome Temp./Hum. -8°/67% Transparency Conditions ... Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -7.5°/62%

Exp. Mtr. A / S	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
100→400		V 0.08	G6III	Speckle	1800/ 520	300μm	5200i			1.5 neg.	
N 100										1.0 neg.	

251 Tues-Wed

Date 1990 Feb 27/28 Observers Bagnuolo (CHARA), KK/TN, SAS

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
COMP008	Comparison			17:41	17:47			Special Ferle	
CAP09 TAG sum	α Aur (Capella)	1990.5 5h 16	+45 59	18:06	18:08	0057E			
CAP10 TAG sum	α Aur (Capella)	"	"	18:13	18:30	0034E			
CAP11 TAG sum	α Aur (Capella)	"	"	18:31	18:56.5	0008E	+46 03		
CAP12 TAG sum	α Aur	"	"	18:58	19:08	0003W			
Cap13 TAG sum	α Aur	"	"	19:09	19:30	0025W			
Cap14 TAG sum	α Aur	"	"	19:35	19:55	0050W			
Cap15 TAG sum	α Aur	"	"	20:03	20:27	0112W			
	α Aur / Seeing test	"	"	20:30		Note CCD	stopped down	2 stops	
POLLUX01 TAG	POLLUX (βGem)	1990.5 7h 44.8	+28° 03	20:41	20:57	0032E			
POLLUX02 TAG	Pollux	"	"	20:54	21:14	0010E			
POLLUX03 TAG	Pollux	"	"	21:15	21:38	0004W			
	" Seeing test	"	"	21:29		CCD ~~cover~~ open	down 2 stops		
	" Seeing test	"	"	21:33		CCD WIDE OPEN			
FLAT008	Flat field					○ ○	platform	Tungsten A=1.5	3600
COMP009	Comparison			~23:50			normal Ferle	clear	~9000s

Spectr. Temp. ..... Dome Temp./Hum. -4°/61% Transparency Conditions ... Clearing ... Gusty NW wind

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -5.5°/63%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
A/B 350/420				Speckle	1800/52.7°	300μ	5120Å	PCS			
400/600		0.08	6611							cut to make adjustments	
600/900		"	"							6.7 megabytes	
850/1300		"	"							10.5 meg.	
800/1200		"	"							4.7 meg (TAG on E:)	
900/1500		"	"							11.3 meg (TAG on E:)	
800/1300		"	"							8.8 meg. (Tag on H:) focus expts.	
800/1300		"	"							13.4 meg (Tag on H:)	
→ Re/Time (Jx0)				31 x 31	pixels; 4 frames;				FM000234.SAS	Dome W NW firing	
400/500		1.14	KOIIIb	Speckle	"	"	"			1.7 meg (Tag on E:)	
700/500		"	"	"						4.4 meg some cloud	
150/300		"	"						~~FM000235.SAS~~	Dome S W firing 2.5 mag	
									FM000235.SHS	~~2.5 mag~~	
									FM000236.SAS		
780/1300	no	1.0 used									
30/35											

253 Wed-Thur

Date 1990 Feb 28/Mar 1 Observers T.w./SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FLAT009	Flat Field					Diffuser	IN	A 1/4 ND02	7200
COMP010	Comparison							FeNe	3600
CAP16 TAG SUN	Capella & Aur	1990.5 5h 16	+45 59	18 27	18:47				
CAP17 TAG SUN	& Aur (Capella)	"	"	18:48	19:05				
CAP18 TAG SUN	& Aur	"	"	19:07	19 22	0022W	+46 02		
CAP19 TAG	& Aur	"	"	19:31	19:57				
	11 Seeing Test			20:00					
	Jupiter								
Comp011	Comp			21 51		0 0	platform	FeNe clear	3600
FLAT010.SUN	FLAT Field		=	23 20	01 20	"	"	TUNG ND02	7200

Spectr. Temp. ..... Dome Temp./Hum. ...5°/60%. Transparency Conditions Clear...cloudy soon.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Medium NW wind
Clouds @ 20:30

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1900/2400				Speckle	1800/52.7°	300μ	5120Å			fiber still at 25°, .055	
40/40							(5120Å actual plate center)				
700/1300		V 0.08	66 1/4							Dome facing West	
		"	"							10.8 megabytes	
		"	"							4.6 meg partcloudy	
		"	"							cnts 100 -> 1900 in dome at cloud	
		"	"							4.2 meg	
										8.5 meg.	
				4 frames	31x31	Real time	[CCD noisy when in "H" mode but OK in software mode			FM000237.SAS	
							CCD removed OK after switch back to HARDWARE mode.			L-Noreau tour V 30 people	
35/45											
1100/1450	Note "Clear" not A=1/4 as in FLAT009 rotation.									Diffuser OUT	
Homed Aperture. Tried (IND 0.2) TUNG signal at A=1/4 [A=100, CHANNEL B=130]									A-clear, ND=0.2 A=400, B=1450 again.		
Also clear but ND=0.2 and it 95. Fe Ne (Clear) no ND still A/B 35/45											
Also (TUNG, no ND, A-1/8; A/B 170/210											

255 Thurs - Fri

Date MAR 1/2 1990 Observers KK-Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FLAT011.SUM	Flat					diffuser IN. ND = 0.2		Tung A = '4	3600s
COMP012.SUM	Comparison							Fe Ne A clear	3600s
Comp013.SUM	Comparison	Sun STILL UP (while on Capella)		17 39	18 14	(Diffuser OUT)	NOND	Fe-Ne clear	35 min
CAP20.SUM TAG	Capella	05 16.0 1990.5	+45 59	19 18	19 49	00 52W			
CAP21.TAG SUM	"			19 50	19 58	01 01W	+46 03		
DARK01.TAG SUM	DARK	shutter closed, all off		20 46	22 04	0 0	plate fog		
DARK02.SUM	"			22 15	22 57	"	"		
DARK03.SUM				22 58	23 44				

Spectr. Temp. ..... Dome Temp./Hum. 0°C / 73% Transparency Conditions PART Cloudy

Focus ..... very gusty from SW

Spectr. Temp. ..... Dome Temp./Hum. ..... Note All Plates = equal in A & B now

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
600/1050				Spectle	1800/47°	300μ	4250Å			aperture 20° 0.055 CAPELLA + SKY	
30/30				"	"	"	"	Stellar	signal at 4250 ≈ 200 probably too low		
60/60					1800/52.8	300μ	5110Å*			* (actual plot center	
200-~~500~~ A and B	super poor		(2.27 hrs exp tuq file)					Restart @ 1918	[19 00 - 19.15	signal in clouds high wind < 100 average]	~~Fair to~~ (574K)
~~60-100~~ unable to	clouds seeing (signal 100-600 in A and B)										
210 A&B									DARK-CAL TAG	(170K).	
210 A&B	Room light on full this time.										
	Room light off this time.										

Kitt Peak National Observatory

257 #1 Fri - SAT

Date MAR. 2/3. 1990 Observers T.n./MKi

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2925 MKi	FLAT			16 30	18 30	ND=2.0 0 0	platform	TYNG A-Y8	7200sec
	Comp (test)					"	"	Fe-AR CLEAR	600
26	Comp at BM Cass posn					reversed		"	400
27	BM CASS	00 486	+63 33	21 50	22 10	0740W	+6402		1200
28	"	"	"	22 13·3	22 333	0803W			1200
29	Comp					"			400
30	BM Cass	00 486	+63 33	22 450	23.05	0835W			1200
31	"	"	"	2307	23 27	0857W			1200
32	Comp							Fe Ar clear	400
33	HD103095	11 472	+3826	23 46	00 06	01 07E	+3749		1200
34	Comp at	HD103095	posn					Fe Ar CLEAR	400
2935 MKi	HD 107328	12 153	+0353	00 273	0037·3	0 18E	+325		600
	Comp							Fe Ar CLEAR	400
2936 MKi	HD 123782	14 046	+4956	00 51	01 06	0236E	+4933		900
37	Comp							Fe Ar CLEAR	400

Spectr. Temp. ..... Dome Temp./Hum. 0°C 56% Transparency Conditions ... Clear Rising by 21:30

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ D	P.H.	Program	Remarks	Quality
40/1400	Diffuser	IN	PCS Red Cell	1800/62°	BS	6496*	IA	written	* Actual plate center	400 mm
14/90	Diffuser out						IA	not written		
10/30	Diff out						IA	written	signal way down	
10/50		V 39					IA	written		
10/60							IA	written		
10/30	diffuser out						IA			
10/50							IA			
10/60							IA			
10/30	diff out						IA			
10/400	OK	V 645	68V p				IA	std vel		
10/50	diff out						IA			
30/1700	so so	V 496	K I III				IA	std UCL	Cnts to 2500/sec ND 0.3 in beam	
10/80							IA	Forgot	to write Cnts to 2300	
30/1600	poor	V 525	M2 III wb				IA	std vel	ND 0.3 in still	
10/65							IA			

.259 pg #2

Emulsion Batches: .....

Date 1990 MAR 2/3 Observers T.A./MK.I. .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
SP002938 MKI	HD126053	14 18.1	+01 43	01 22.3	01 42.3	02 16E	+1 19		1200
39	Comp								400
40	HD126053	14 18.1	+01 43	01 54.7	02 14.7	01 43E	+1 19		1200
41	Comp								400
42	HD146361	16 10.9	+37 07	02 37.1	02 47.1	03 02E	+33 56		600
43	"	"	"	02 56.7	03 06.7	02 42E			600
	Comp								400
	HD150708	16 37.7	+60 54	03 17.4	03 47.4	02 26E	+60 47		1800
	Comp							FOAR CLEAR	
	HD150708	16 37.7	+60 54	04 03	04 33	01 39E	+		1800
	Comp								
	HD143313	15 58.7	+25 34	04 47.5	05 17.5	00 15E	+25 38		1800
	Comp								
	HD143313	15 58.7	+25 34	05 29.5	05 59.5	00 27W			1800
	Comp								400

Spectr. Temp. ..... Dome Temp./Hum. ÷25°C/57% Transparency Conditions ..... Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20 / 750	so so	6.27	G1V	PCS Red Coll	1800/67°	BS	6500Å	IA	std vel	* ND Removal CuTs with ND 0.3 = 300-400	
10 / 70								IA			
10 / 700	OK							IA	std vel	cuts to 1400	
10 / 75		~~5.76~~						IA			
20 / 1400		5.76	F6V / G0V					IA	MK. pgm	close dbl (brighter one)	
20 / 1600								IA	"		
								IA			
20 / 80		VaR	G5					IA	MK. pgm	(Brighter one) Close dbl N.S alignment	
40 / 50								IA		Fe-Ar cuts down again we are at 60° Dec right too.	
40 / 70								IA	MK. pgm		
								IA			
<10/140		8.4	(K2V / K6V)					IA	MK pgm	Fld drawn	
<10/55								IA			
<10/130		8.4						IA	MK pgm	Ifhooks a faint emission	

26/pg #3

Emulsion Batches:

Date 1990 MAR 2/3 Observers MK - TL

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
	HD 145001	16 036	+1719	06 08:5	06 18:5	0037W	+17 05		600
SP002953mKi	Comp							FEAR CLEAR	400
	FLAT (on Timer)			0636		0 0	platform	TUNG A=1/8	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ....Ot.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..-6.5C H 60%.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/1800	poor	V 5.00	G8III	PCS	1800/62°	BS	6500Å	IA	Std Vel	Brt one of pair	
								IA	n.c. Diffuser was out for all Comps		
3/350	ND=2.0		Diffuser IN					IA			

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SAT - SUN Pg #2

Date 1990 MAR 3/4 Observers ...J.n....MKi checking in)

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
55 MKi	Comp	at BM Cass Loc'n		1909		Released	NO ND	FeAr Clear	400
56	BM Cass	00 48.6	+63 33	19 23.7	19 53.7	05 28 W	+64 01		1800
57	Comp			1956		"	"		400
2958	BM CASS #2	00 48.6	+63 33	20 07.3	20 37.3	06 11 W			1800
2959 MKi	Comp	at HD65583 posn					D.i	FeAr Clear	400
	HD 65583	07 54.3	+29 31	20 55.6	21 25.6	00 05 E	+29 16		1800
	Comp							FeAr Clear	400
	HD 66141	07 57.1	+2 36	21 45.8	22 05.9	00 33 W	+2 24		1200
	Comp	while moving to next star (Signal Remained the same)						FeAR Clear	300
	HD 92588	10 36.3	−1 13	22 17	22 37	01 25 E	−01 40		1200
	Comp							FeAr Clear	300
	HD 92588	10 36.3	−1 13	22 46.5	23 06.5	00 55 E	−01 40		1200
	Comp		1					FeAr Clear	300
SP00296 MKi (HD 103095)		11 47.2	+38 26	23 17.0	23 47	01 37 E	+37 49		1800
2969	Comp					"	"	FeAR Clear	30

Spectr. Temp. ..... Dome Temp./Hum. -8°C · 60% Transparency Conditions ... Photometric .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -11.2°C .. 65% Dome opened & Funs on by 18:15 Also Newtonian Flat made Notation at start. I had to upload Sheet before 1st Comp.

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
<10 / 95 *	Diffuser out	*		PCS RedCell	831 / 39.8	BS	6480Å actual	IA		* Cnts at Zenith, Diff in = 140 in B'	
<10 / 40	V V poor	V 29						IA	Obs pgm		
10 / 70								IH			
10 / 50	V V poor							IA	Obs pgm		
10 / 100	Diffuser still out.							IA			
15 / 300	V poor	V 7:00	dG7					IA	stl vel	4 TRAIN cont by e21-21, Bi binoculars telescope Some cloud at end	
12 / 160								IA		diffuser out still Fe-Hr signal up again	
30 / 1000 / 2000	poor	V 4.39	K2III	ND 0.3	put in beam			IA	stl vel	Dome T = -11°C Clear again / seeing improving	
12 / 150								IA			
15 / 500 *	so so to poor	V 6.26	sgK1	ND Removed (* 250 cnts			within it)	IA	stl vel	1000 cnts in Red good seeing	
10 / 140								IH			
15 / 800	so so poor	V 6.26	sgK1					IA	stl vel		
10 / 150								IA			
3 / 600		V 6.45	G8Vp					IA	stl vel	cloud by end	
10 / 120								IA		Note - Diffuser still OUT	

265 #2

Date 1990 MAR 3/4 ... Observers ..TN..... Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
70.TN3	FLAT (Test)			01 06	01 11	0 0	platform	TUNG H-118	300
71.TN3	" "			01 15	01 20	"	"	"	300
SP002972.TN3	FLAT for Observations (~~3600~~ secs)			01 27	02 27	"	"	TUNG A-118	~~3600~~
	Note I noticed MAR 4 that Header dates are 1986, not 1990 I corrected Date on EST in Shact.								

Spectr. ious.. spectr.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp.	Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3x	40/2450	Diffuser	IN		PCS Red Coll	831/398	BS	6480Å	IA	ND=2.0	~~wr~~ writes	
3x	25/1500	"	"	"	"	"	"	"	IA	ND=2.0+0.2	(writes for temp use)	
	40/2400	Diffuser	IN	"	"	"	"	"	IA	ND=2.0		
		Note FLAT with ~~2~~ ND 2.0 + 0.3 (signal) = N00 in B channel // ND 2.0 + 0.1, B= 1800 cts/sec										

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sun - mon

Date 1990 MAR 4/5 Observers Udalski / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
2973	Flat			1844	1944	0 0	platform	TuNG A=1/8	3600
74	Comp at HD66141 posn							Fe Ar Clear	300
75	HD66141	07571	+0236	20 55	21 05	0024E	+0222		600
~~77~~ 76	Comp	prob written 2x by mistake ∴ 76 deleted						FeAr Clear	300
~~78~~ 78	XY UMA	0902.7	+5454	2148	2218	0019E	+5435		1800
~~79~~ 79	Comp					"	"	FeAr Clear	300
~~80~~ 80	XY UMA	0902.7	+5454	2232.3	23023	0025W	"		1800
81.4D	Comp						"	FeAr Clear	300
82	XY UMA	0902.7	+5454	2319.4	2359.4	0114W			1800
83	Comp at XY Uma posn								300
84	HD92588	1036.3	-113	0008	0028	0022W	-139		600
85.4D	Comp at HD92588 posn					"	"	FeAr Clear	300
86	Flat			0106		0 0	platform	TuNG A 1/8	3600

Spectr. Temp. ..... Dome Temp./Hum. ~8.5°C 60% Transparency Conditions semi cloudy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
/1800	ND	2.0+0.1		PCS Red Coll	~~83~~/39.8°	BS	6480	IA		Diffuser IN	
10/80								IA		Diffuser IN	
70/1500		4.39	K2III					IA	std/vel	ND 0.2 in beam	
0/130								IA		Diffuser OUT	
<10/45		9.5	G2V					IA	UD pgm	Hazy	
8/100								IA			
8/55								IA	UD pgm	not as hazy as before	
10/100								IA			
10/50								IA	UD pgm	cloudy by end	
12/90								IA			
15/500		6.26	sg K1					IA	std/vel	cuts to 1400 briefly, thin cloud	
15/140								IA			
30/1900	ND	2.0+0.1, Diffuser IN						IA			
								All	backed up to before final Flat, (3.5" floppy)		

26⁹ pg #1 MON-TUES UD = Andy Udalski

Date 1990 MAR 5/6 Observers U.D., [redacted] gc., T.n.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
87	FeAR	at posn of HD66141					+02 22	FeAr A=1/2	200 ~~A=2~~
88	HD 66141	07 57.1	+02 36	18 47.8	18 52.8	2 32 E	+02 22		300
89	Comp	while moving to next star							300
90	XY UMA	09 02.7	~~+04~~ +05 54	19 04.8	19 34.8	E	+54 34		1800
91	Comp	"	"			"	"		200
92	XY UMA	"	"	19 41.5	20 11.5		"		1800
93	Comp						"		200
94	XY UMA	"	"	20:17.6	20~~22~~ 23.6		"		~~800~~
95	XY UMa	"	"	20 44.4	21 14.4				1800
96	Comp								200
97	XY UMa	"	"	21 20.0	21 50.0				1800
98	Comp								200
99	XY UMa			21 55.2	22 05.2				1800
~~003000.40~~	Comp								200
01	XY UMa			22 31.0	~~23~~ 01.0	0029 W			1800

Spectr. Temp. ..... Dome Temp./Hum. -72 c / 49% Transparency Conditions .. Photometric .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Dome opened + Focus on by 18:15

* seeing estimated Rel To 2.4" Fiber in post hole

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion ~~(6480)~~ ?	P.H.	Program	Remarks	Quality
10 / 160				PCS Red Coll	831/3948	BS	6480R	IA	Diffuser IN for All		
40 / 2000		V 4.39	K2III					IA	stdvel	ND 1.2 in beam	
								IA			
14 / 400	* 3"	V 9.5	G2V					IA	UD pgm	Ecl Bin = 0.5 day period	
12 / 130								IA			
15 / 350	3"	9.5	G2V	"	"	"	"	IA		Train C ≈ 2010	
13 / 130								IA			
12 / 300	3"	9.5	G2V	"	"	"	"	IA	FIFOs failed (all Vitup) written anyway		
10 / 350	"	"	"					IA	Had to upload PCS pgm 1st.		
10 / 130								IA			
10 / 380								IA			
10 / 120								IA			
13 / 400	<3"							IA		Most light in fiber hole	
10 / 120								IA			
10 / 400	3"							IA			

271 #2 Udalski

Date 1990 MAR 5/6 Observers U.D./J.T.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
02	Comp					W	75435	FeAR A-1/2	200
03	XY UMa	09 07 2	+54 54	23 06.4	23 36.4	W	"		1800
04	Comp								200
05	XY UMA	"	"	23 41.7	0 11.7	01 40 W	"		1800
06	COMP	"	"						200
3007	XY UMA	"	"	0 17.9	0 47.9	W			1800
3008	Comp								200
9	XY UMA			00 53.4	01 23.4	02 51 W			1800
10	Comp								200
11	XY UMa	"	"	1:29.8	1:59.8	03 28 W			1800
12	COMP	"	"						200
13	XY UMa			02 05.8	02 35.8	W			1800
14	Comp							FeAR A-1/2	200
15	XY UMA			02 41.6	03 11.6	04 40 W			1800
16	COMP								200

Spectr. Temp. ..... Dome Temp./Hum. −10°C 46%H Transparency Conditions ... Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Dome Facing N. Light NW wing

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
10/130				PCS Red Cell	831/398	BS	6480Å	IA			
8/400								IA	40 pgm		
10/125								IA			
10/350								IA			
10/120								IA			
10/300	4"							IA		Plotted	
10/130	~~3~~ 4"							IA		4" seeing not as good as before	
10/250								IA			
10/130								IA			
10/200								IA			
10/130								IA			
10/150	poor							IA			
10/120								IA			
10/100								IA			
10/120								IA		while unreversing	

273 #3

Udalski

Date 1990 MAR 5/6 Observers U.D./.T.n

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
17	XY UMA	08 07.2	54 54	3:25.1	03 55.1	05 23W			1800
18	Comp							FeAr A=1/2	200
19	XY Uma			04 00.5	04 30.5	05 59 W	+54 31		1800
20	Comp								200
21	XY UMA	"	"	4:37.4	5:07.4	W			1800
22	Comp								300
23	HD 126053	14 18.1	+01 43	05 19.6	05 24.6	00 43W			300
24	Comp								200
25	HD144579	16 01.5	+39 24	05 34.5	05 39.5	00 12 W			300
26	Comp								200
27	HD161817	1950 17 44.7	+25 46	05 47.0	05 53.0	01 15 E			360
28	Comp								200
29	HD154417	1900 17 00.2	+0 51	05 59.2	06 09.2	00 19 E			600
30	Comp								200
31	Flat			06 30		0 0	platform	TUNG A=1/16	7200

Spectr. Temp. ..... Dome Temp./Hum. -12.°C / 58% H Transparency Conditions ..Still Fine.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -12.6°C 56%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/240	4"	9.5	G2V	PCS Red Coll	~~831~~/398	BS	6480A	IA	UD pgm	Unreasolved	
10/100								IA			
10/140	poor							IA	UD pgm		
10/95								IA			
10/125								IA			
8/100								IA			
25/1200		V 6.27	G1V					IA	std vel	ND=0.3	
10/140								IA			
30/1700	ok	V 6.66	dG8					IA	std vel	ND=0.3 std	
~~3/1900~~								IA			
30/1900		V 6.99						IA	UD pgm	ND removed	
10/160								IA			
35/2000		V 6.0	G0V					IA	std vel	ND 0.3 inserted	
10/150								IA			
30/1850		ND	2.0+0.1	Diff	as usual			IA			

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Tues-Wed

Date 1990 MAR 6/7 Observers T.h Fe checking on me

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
5P00 3032.Tn	Comp			18 33		0 0		Fe Ar Clear	300
33	HD65583	07 54.3	+29 31	19 03.3	19 13.3	0206E	+29 17		600
34									
34	Comp at XY UMa posn							Fe Ar Clear	300
35	XY UMA	09 07.2	+54 54	19 40.3	20 00.3	230E	+54 35		1200
FM00 236.Tn	" seeing test		Dome NE, no wind						
36	Comp at XY UMA posn.							Fe Ar Clear	200
37	XY UMA	09 07.2	+54 54	20 13.0	20 33.0	0127E			1200
39	Comp							Fe Ar Clear	200
39 TNA	XY UMA	09 07.2	+54 54	20 40.0	21 00.0	0100E			1200
40	Comp at XY UMA posn					Reversed		Fe Ar Clear	200
41	3m Cass	00 48.6	+63 33	21 38.1	21 58.1	W			1200
42	Comp							Fe Ar Clear	200
43	3m Cass	00 48.6	+63 33	22 03.3	22 23.3	0809W	+64 00		1200
44	Comp w/o moving tel							Fe Ar Clear	200
45	FLAT at end			01 21		0 0	platform	TUNGAVIA	3600

Spectr. Temp. ..... Dome Temp./Hum. -6.3°C / 48% Transparency Conditions . Photometric .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -9.6°C / 55% H

Dome open & Tuns on by 18:15
Log temp running

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/135	ND	0.1		PCS Red Cell	831/3918	BS	6480Å	IA			
40/~~2200~~	~~3~~	7.00	dG7	(<10° from ½ moon)				IA	std/vcl	ND 0.2 * cnts to 3400 for a stretch	
Sky cnts at end 1915 Est near						4065583 = A/B 5/15					
10 ~~17~~0	~~ND 0.1~~	ND removed						IA			
8/480	~~3~~"	~~9.5~~ V	G2V					IA	Ud pgm	cnts to 700/sec in B almost fill in 2.4" hole Seeing better than previously	
3B×23		"	"	"N" make Int×4 (1/15 sec)				2	on Fiber hole, 4 off hole		
10/260	200 secs, NO ND, Diffuser IN							IA			
10/600	<3"	=9.5 V	G2V					IA	Ud pgm	Continuing to Fill Phase 2 gap	
10/270								IA		From PCS failure last night	
13/650	2.5"	=9.5 V	G2V					IA	Ud pgm	All light in hole 750 cnts in B"	
<10/260								IA			
15/600	~3"	=9.0 V						IA	Obs pgm	cnts to 800 in Red goal seeing	
10/210								IA	Dome T = -9.5°C		
10/400								IA	Obs pgm	cnts to 700 in 3" seeing	
15/~~2~~10								IA	Bar telup	to incl this entry	
30/1300								IA	ND 2.0 + 0.1, Diff IN A = 1/16		

277 pg #1 Wed-Thurs

Udalski

Date 1990 MAR 7/8 Observers Ud. - T.n

Emulsion Batches:

Tour - Jupiter 1 hr

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
46.UD2	COMP at	HD65583	posn				No ND	FeAr Clear	200
47.	HD 65583	07 54.3	28 31	1959.4	20 05.4	01 10 E	+29 18		300
48	Comp - while Reversing							FeAr Clear	200
49	XY UMA	09 07.2	+54 54	20 27.6	20 57.6	E	+54 32		1800
50	COMP							FeAr Clear	200
51	XY UMA			21 02.9	21 32.9	00 51 E			1800
52	Comp							FeAr Clear	200
53	XY UMa	09 07.2	+54 54	21 38.3	22 08.3				1800
54	Comp			22 09					200
55	XY UMa			22 13.9	22 43.9				1800
56	Comp								200
57	XY UMA	"	"	22:49.9	23 19.9				1800
58	Comp								200
59	XY UMa	"	"	23:25.7	23 55.7				1800
60.UD2	Comp								200

Spectr. Temp. ..... Dome Temp./Hum. -6°C 59% Transparency Conditions ... Fine .....

Focus ..... Focus attempt messed up grating tilt.

Spectr. Temp. ..... Dome Temp./Hum. ..... * We lost our λ posn & had to get back to 39.8° of 831 grating

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
10/260	Diffuser IN			PCS Red Cell	~~831~~/39.8	BS	6480*	IA			
40/2800	Fine	7.00 V	dG7					IA	std vel	counts to 3200 Briefly ND 0.2 in beam	
1								IA			
10/500	OK	9.5 V	G2V					IA	Ud Ecl Bin	ND Removed of course	
10/230								IA			
10/500								IA	Ecl Bin		
								IA			
10/550								IA	Ecl Bin		
15/230								IA			
15/550								IA			
10/320								IA			
10/450								IA			
14/230								IA			
15/430								IA	Ch B FiFo failed ~ at 900 secs in to Exp with HeNe RI close		
10/210								IA			

27" pg #2

Udalski

Date 1990 MAR 7/8 Observers Ud.-T.n.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
SP00 30 61.002	XY UMa	09 07.2	+54 54	0 :00.7	00 30.7	02 07 W	+5431		1800
62	Comp							FeAn Clear	200
63	XY UMa	〃	〃	0:38.0	01 08.0				1800
64	Comp								200
65	XY UMA	〃	〃	1:15.6	145.6				1800
66	COMP								200
67	XY UMA	〃	〃	1:52.7	02 22.7				180
68	Comp								20
69	XY UMA			2 28.6	02 58.8				180
70	Comp								200
71	XY UMA			03 04.0	03 34.0				1800
72	COMP								200
73	XY UMA			3 :40.0	04 10.0				1800
74	Comp								200
75	XY UMA			4:16.2	446.2				1200
76	COMP								200

Spectr. Temp. ..... Dome Temp./Hum. -8°C / 65%H Transparency Conditions . Fine .....

Focus ..... Light East Breeze

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
10 / 350		V 9.5	G2V	PCS RedCell	831/39.8	BS	6480Å	IA	Ecl Bin		
15 / 210											
10 / 350											
14 / 210											
10 / 450											
10 / 220											
10 /											
10 / 240											
10 / 530											
15 / 230											
10 / 500											
10 / 120											
10 / 400											
10 / 210											
10 / 250											
10 / 180											

281 Pg #3

Emulsion Batches:

Date 1990 MAR 7/8 Observers U.d./T.n.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
77	HD 126053	14 18.1	01 43	5:11.2	5:16.2	01 39W			300
78	Comp								200
79	HD144579	16 01.5	+39 24	05 22.6	05 27.6	00 08 W			300
80	Comp								200
81	HD161817	17 44.7 (1950)	+25 46	5.35.2	5 41.9	01 18E			400
82	COMP								
83	HD 154417	17002	+0 51	5:51.3	06 01.3	00195			600
84	COMP								200
	Flat			6 23				Tung A-1/16	60

Spectr. Temp. ..... Dome Temp./Hum. -8.8°C 73% Transparency Conditions ... Fine ...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
10/2200		6.27	G1V	PCS Red Coll	831/39.8°	BS	6480Å	JA	std vel	ND=0.2	
0/220											
30 D400		6.66	dG8						std vel	ND=0.2	
0/220											
10/1700		6.99								ND=0.2	
0/230											
0/1800		6.01	G0V							ND=0.3 cuts to 3400	
0/240										Ducked up to here	
6'/1700	ND 2.0		Diff IN								

283 Thurs-Fri

Emulsion Batches:

Date 1990 MAR 15/16 Observers MK:-SAS-Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
3086.SAS	FLAT			20 08·5	22 08·5	00 00	platform		
88	Comp					Reversed ≈1030 W	+6400	FeAr clear	200s
89	BmCASS			00 39·6	00 51·8	11 16 W	+6400		730
90	Comp								700
3087.SAS	DARK (was written before 1st Comparison)								
~~SAS~~	MAR 16/90 MAP Frames								
91.SAS	Fe-Ar MAP						no ND	FeAr clear	300
92	Fe-Ne						ND 2·0	FeNe A=1/4	300
93	Fe-Ne						ND 2·0	FeNe A=1/2	300
94	Fe-AR						no ND	FeAr A=1/4	300
95	Fe-AR						no ND	"	300
96	Fe-Ne				11 35 written		ND=2·0	FeNe A=1/2	300
97	Fe-Ne						ND 2·0	FeNe clear	300
98	Fe-AR						ND 2·0	FeAR clear	300
3099	Fe-AR						ND 2·0	"	300

Spectr. Temp. ..... Dome Temp./Hum. +12° 80% Transparency Conditions . Clear - hazy - cloudy ....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/2000				PCS Red Coll	831/39.8°	BS	6480A	IA			
								IA			
<60	poor	V= 9.5						IA	Obs Pgm	Cloud, haze, air	
<20/150								IA			
								IA ?			
A B		Control prompts wavelength		PCS Red Coll	831	BS	Est central wavelength				
		6612			831/39.8		6480	IA			
		"			"		"	IB			
13/300		69	81.68		831/40.8		6800	IA			
13/140		"			"		"	IB	Note excessive stk lines at both ends		
10/260		7349A			831/41.8		7200	IA	uR (Header wrong) same as previous header?		
20/250		"			"		"	IB			
		7744A			831/42.8		7550	IA	uR		
15/150		"			"		"	IB	uR		
15/160		8077A			831/43.8		7900	IA	uR		

285

Emulsion Batches:

Date 1940 MAR 16/17 cont. Observers T.h. - T.e.t.z

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
3100	FeNe MAP Frame					0 0	platform	FeNe A=1/4	300
3101.SAS	FeNe			00 26		4	4	Fe-Ne A=1/8	300
3102	FeAR							FeAR A=1/16	300
3103	FeAR			00 53				FeAR A=1/8	300
3104	FeNe							FeNe A=1/3	300
3105.SAS	FLAT	MAR 17	early evening in anticipation of posible Obs.			No Obs tonight however			

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30 / 280	NO ND.		8077	PCS Red Coll	831/438	BS	7900	IB	WR: Fla Diffuser IN	for all DIMP frames	
15 / 130	NoND		8437				8300	IA	written		
10 / 150	NoND		"				"	IB	wr		
	NoND		8795				8650	IA	wr		
15 / 130	NoND		8795				"	IB			
A B											
35 2000	ND	2.0,	A 1/16	Red Coll	831/398	BS	6480 Å	IA	WRITTEN any way, Can be used	next night.	

287 sun-mon

Date 1990 MAR 18/19 Observers Tn - SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
3106.SAS	Flat			1843	19 23	0 0			2380
	FeAR							FeAR Clear	200
	BM Cass	00 48.6	+63 33	1952	20 22	06 57 W	Reversed +64 01		1800
	FeAR							FeAR Clear	200
	BM CASS Exp 2	00 48.6	+63 33	20 32.0	21 02.0	07 37 W			1800
	FeAR								200
	DARK			2145					10,800

Spectr. Temp. ..... Dome Temp./Hum. +20°C/53% Transparency Conditions ..PART. cloudy - overcast.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +1°C / 54% FANS on ; Dome open by 1910

Exp. Mtr. A / B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				PCS Red Coll	831/398	BS	6480Å	IA		Hallef due to clouding	
10 / 150	No	N.D. ;	Diffuser IN					IA			
7 / 180	4"-5"	~9.5						IA	Obs pgm	cuts to 350sec	
10 / 140								IA			
3 / 200	3"-4"							IA	Obs pgm	+63: 57:54 paddle Reading	
								IA			
2:- / 210								IA	All Lights out	{Mirror as well, RSS shutter doesn't work now}	

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#1

Date 1990. Mar. 20/21 Tue/Wed ..... Observers Tn/SAS.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0	Prompted Flat at δ Per posn				19 51		+47 49		30sec
1	Comp							ThAR	10sec
2	HD22928 δ Per	3h 35.8	+47 28	20:01	20:41	W			
3	Comp			20:42				ThAr	10 s
4	HD22928 δ Per	"	"	20:43	21:25	0519W	47° 49		
5	Comp							ThAR	10sec
6-9	Flats at δ Per posn		25sec →	1480, 24sec →	1403	/26sec →	1480, 27sec	15	33
10	Comp at Eta Uma posn							ThAR	10 s
11	Eta Uma	13 43.5	+49 49	23 09.7	23 15.7	2h 25 E	+49 25		
12	Comp							ThAr	10sec
13	Eta Uma HD120315	"	"	23 49	00 20.1	1h 50 E			
14	Comp							Th-Ar	10 sec
15	HD120315	"	"	00 24	00 51				
16	Comp			00 52				Th-Ar	10 s
17	Comp			00 58				Th-Ar	10 s

Spectr. Temp. ..... Dome Temp./Hum. 0°C/67%. Transparency Conditions Clear.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Lovely AURORA with Red in the west Green in NORTH TO Zenith.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ × 6328	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	18.45	150μm .0241	λ = 4481Å .4950	127	Fab prgm	Topped @ 19:45	1966
											1246
7700	bad	V 3.01	B5III								1369
960											1215
8860	~~Bad~~	"	"							T=+0.184	1538
980											1173
55,500	for 25sec									T=+0.185	
										Topped @ 2240	1224
15,500	poor	V 1.9	B3V							T= +0.197	3837
											1264
15,100		"	"							(No apt evident)	3554
1,000											1205
15,000	better	"	"								3410
											1228
										Moved Tel in Dec + back again, in order to more done	1222

29 Pg 2

Tue/Wed

Date 1990 Mar 20/21 Observers Tn/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
18	HD120315 η Uma	13 43.5	49° 49	01:01	01:25	00h45 E			
19	Comp			01:25.5				Th-Ar	10sec
20	HD120315 η Uma	"	"	01:26.5	01 48 3	00 22 E			
21	Comp							Th-Ar	10s
22	HD120315 η Uma	"	"	01:50	02 10	00h00			
23	Comp			02:11				Th-Ar	10s
24	HD 120315 η Uma	"	"	02:13	2 32				
25	Comp			02:34				Th Ar	10s
26	HD 120315 η Uma	"	"	02:34.7	02:51.7				
27	Comp			02:52				Th-Ar	10s
28	HD120315 η Uma	"	"	02:53.5	03 11.1	~~h25 W~~			
29	Comp							Th-Ar	10s
30	HD120315 η Uma	"	"	03 13	03 338	1h25 W			
31	Comp							Th-Ar	10s
32	HD120315 η Uma	"	"	03:36	03 52.6				

Spectr. Temp. ..... Dome Temp./Hum. -2°/66% Transparency Conditions ... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Aurora back with a vengence by 01:20
Fast N→S pulses to south of zenith.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion (× first)	P.H.	Program	Remarks	Quality
		V 1.9	B3V	Echelle/ Reticon	18.45	154μm .241	λ=4481Å .4950	07	Fds prgm		3322
											1174
16 100		"	"							no 4pt in Raw plot	3852
											1172
15 000		"	"							no 4pt in Raw plot	3555
											1189
15,500		"	"								3380
											1180
5,000		"	"								3395
											1199
15,110	V POOR	"	"							T= +0.195 clear	3393
930											1160
17,000		"	"								3560
											1185
15,000		"	"								3618

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P3

Tue-Wed

Date 1990 Mar 20/21 Observers TA/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
33	Comp			03 54				Th-Ar	10s
34	HD 120315 η UMa	13h 43.5	+49°49	03:54.5	04:16				
35	Comp			04:17				Th-Ar	10s
36	Comp	"	"	04:21				Th-Ar	10s
37	HD 120315 η UMa	"	"	04:22.6	4:45				
38	Comp			04:45.5				Th-Ar	10s
39	HD 120315 η UMa	"	"	04:46	5:09				
40	Comp			5:10				Th-Ar	10s
41	HD 120315 η UMa	"	"	05:11	05:36	03 28 W			
42	Comp			05:36.6				Th-Ar	10s
	Flats	4@ 465 sec		2749, 2852, 2854, 2867					
		4@ 80 sec		3429, 3449, 3453, 3465					
		4@ 87 sec		3782, 3790, 3792, 3781					
	Files backed up to floppy. Repacked + named			Mar2190.dat + H	Mar2190.dat on drive C				

Spectr. Temp. ..... Dome Temp./Hum. -2.5/65% Transparency Conditions ..... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -2.5/66%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	18.45	150μm .241	λ = 4488Å grat .4950	127	Eds prgm		1173
19 000		1.9	B3V								3606
										Top up T = 7190	1185
											1181
		"	"								3745
											1186
19 000		"	"								3584
											1187
19000		"	"								3587
											1181

295

Wed-Thurs

Date 1990 MAR 21/22 Observers SAS-Tu... Service for KT

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0	Prompted Flat			1912					20
1	Comp			1915				N-Ar	20s
2	γ Gem	06 3 19	+16 29	1922-7	1943.7	00 45 W	+16 28		
3	Comp			1946				N-Ar	20s
4,5	Flats	@ 3 sec	206,	210 ADU					

Spectr. Temp. ..... Dome Temp./Hum. +5.2°C ... 45% Transparency Conditions Hazy-? intermittent cloud .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... last Afternoon top'up @ 15:37 T = +0.110

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Echelle T.lt	Grating/ Tilt	Slit	Emulsion	P.H. ORDER	Program	Remarks	Quality
				17.10	CROSS 0.4377	50μ .781	5160Å	110		prompted Echelle = 17.35 prompted CROSS = .4355	1598
751											1380
616	OK	V= 1.93	A01IV						KK pgm	ΔRA -06 00 18 / ΔDec 00 05 03 Cloud	206
											1360
						Top up after Flats.			19:55, T = +0.130		
						Top up @ 22:40			T = +0.126	GCON, GLONG started	

297

FRI-SAT

Date MAR 23/24/90 Observers MKi-Tn-Shen

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
TAG PCS 0001.MKi	Flat			17 16	19 16	0 0	plate from	TUNG A=1/4	7300
TAG PCS 0002.MKi	Comp						Readout at Dec DRUM	FeAR A=1/2	300
TAG 0003.MKi PCS 0004.MKi	MWC 560	07 21 01	-07 32 12	?	22 50 Stop	03 14 W	-7 42		
TAG 0005.MKi PCS	Comp			22 54 24	22 57 52 Stop			Fe AR A=1/2	200
TAG 0006.MKi PCS	HD52961	06 58 01	+10 55	23 00 10	23 40 00	04 25 W	+10 49		
TAG 0007.MKi PCS	Comp			23 41 52	23 45 17			Fe AR A=1/2	200
TAG 0008.MKi PCS	HD86986	09 57 04	+15 02	23 57 30	00 55 00	02 42 W	+14 38		
TAG 0009.MKi PCS	Comp			00 56 28				FeAR A=1/2	200
TAG PCS 0010.MKi	HD 146361	16 10 9	+37 07	01 14 30	02 14 30	E	+33 56		
TAG PCS 0011.MKi	Comp				02 20				200
TAG PCS 0012.MKi	HD 146361	16 10 9	+37 07	02 41 30	03 41 30	00 44 E	-8 16		
TAG PCS 0013.MKi	Comp.	1950		03 43 13	03 46 40				
TAG PCS 0014.MKi	V1054 Oph	16 52 48	-08 14 42	03 50 10	04 27 10	00 38 E	-8 16		
TAG PCS 0015.MKi	Comp	* Present		04 24 51	04 32			FeAR A=1/2	20
0016.MKi	SKY at	16 55 04	-08 18 36	04 33 38	05 03 22	00 03 E	-8 16		

Spectr. Temp. ..... Dome Temp./Hum. -3.7°C 55% Transparency Conditions ... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Xmin = 161
XMAX = 3440 [To eliminate "Ringat Fre]

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst. TIME TAG	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30	1800	ND	2.0+03		PCS Red Coll	150/286°	BS	4300Å			Fld Drawn in old Finder book	
50	430									(A 21.11, ≤3secs noise burst when turning corner)		
5	40	3-4	V= 9.5		Note 0003 exp. short early trial End Time of 1st short exp					Encoder Last: 50 Δ -0 0 4 RA Δ -0 3 330EC		
10	380											
10	120	4"	Bc 7.92	A?						Fe pgm	Dome Turn burst 23:29:29	
10	380											
8	280		V 7.93	FHB A						Mki pgm	Fld drawn (encoder RA s -00 00 34 RA)	
8	300										qT 00 22 → 400 04 39 Dec	
30	2000	4"	V 5.76	F6V/G0V						Mki pgm	bottom of dbl (20 megabytes)	
35	2300		V 5.76	F6V/G0V			Big	vibration	Train	0315	encoder Δ RA -0 0 22 Δ Dec -0 0 06 ∴ Reset TIME Ahead 22sec	
5	35	3"	V 9.76	dMe						Mki pgm		
10	350											
510	<10	Star	centered at	16	5447			-08 1915	on 74"	encoders	thin haze	

299 #2

Date .MAR.23/24/90... Observers .MKi-Tay.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
00017.mki	FLAT			~05 11	06 01 16	0 0	To Platform	TUNG H=1/4	3700
PLS 00018.mki	FLAT MAR24/25/90 ↓			19 15	20 19 10	0 0	"	TUNG H 1/8 FeAR	~~200~~
00019.mki	Comp				20 19 10		Elec DRUM		200
00020.mki	MWC 560	07 25 23 1900 03 / 07 21 01	-07 4255 / -07 3212	20 23 20	21 45 00 / 20 ~~53 36~~	01 12 W	-7 39		
00021.mki	Comp			21 1310		W			200
00022mki	Flat			22 2410	23:27:00	0 0		TUNG H=1/4 FeAr A=1/2	
23	Comp			235620	23 5942		Reversed		200
24	HD 52961	06 581	+10 55	00 ~~01~~05	00 4830	0540 W	+10 47		
25	Comp			0049 50	00 53 28		Reversed		
26	HD 56936	09 5704	+15 02	011330	00 3330	0325 W	+1437		
27	Comp								200
28	BM Cass	00 46 6	+63 33	0158 22	025030	10 11 E	+64 02		
29	Fe-Al Comp.				02 5528				200
30	V1054 Oph	16 50 05 1900	-8 0947	03:03:00	~03 11	~~01 52 E~~	-8 16		
31	~~HD 14~~ 5001	16 03 ~~3.6~~	+1719		17 G 90				

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... clouding in .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ... -66°C-65% ...

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30	1500	ND	2.0+0.3		PCS Red Coll	150/286	BS	4300				
50	2000	ND	2.0		"	1800/5018	BS	4820	[Dome T -3°C H=59%]		HB good (Reflecter 446A)	
	300											
7	150	2" OK	V ~9.15								Cloud Start 2041 30	
10	300											
50	2100	ND=2.0										
10	250				PCS got zapped by Flat with no ND in place but A-V8 for ~3 seconds here							
<10	200		B 7.92	A?								
		2"-3" OK	V 7.93	FHB A								
0	210											
8	80		V 9								1990.3 ~00 54 08 +64 02 25	
											~~16 54 59 -5 15 32~~	
10	40		V 9.76	dMe							Cloudy 03:11	
			V 5.34	G8III						stdcel	Int on of Pair Cloud	

301

#2 FOR

Date .MAR. 24/25..... Observers MKi..Tu. ~~Stacy~~....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Flat for MAR 24/25			03 38 10	04 39 05	~~Cy~~		TUNG A 1/8	4K
TAG 000 PCS 32.TN	FLAT MAR 25-26		In Mkichan	18 48 20	19 18 40	~~2~~ 0	0°+-8	TUNG A=1/8	30min
33.TN	Comp			19 23 00			Dec Drum	FeAR HV2	200s
TAG PCS 0034.TN	MWC 560	07 21 01	-07 32 12	19 30 40	22 38 33	30~~9~~ W	-7 42		
35	Comp							FeAR A 1/2	200
36	HD 52961	06 58 1	+10 55	22 46	23 ~~15~~00	4 07 W	+10 50		
37	Comp							Fe AR A 1/2	
38	HD 86986	09 57 04	+15 02	23 21 20	23 50 00	1 44 W	+14 39		
39	Comp							Fe AR A 1/2	
40	HD 109995	12 34 01	+39 51 28	23 58 34	00 19 00	00 20E			
41	Comp								200
42	HD 103095	11 47 2	+38 26	00 30 55	00 48 00	00 50 W	+		
43	Comp							Fe Ar A 1/2	
44	FLAT			01 06 00	03 07 00	0 0	platform	TUNG A 1/8	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .. -4°C .. 66%

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50	2000	ND	2.0		PCS Red Coll	1800/508	BS	4820A				
50	2200	ND	2.0		Setup same as previous night					Dome T = +2°C H = 49% Clear		
45	360	no ND							Dome instr	20:06:10		
10	250	Fine	V 9.5		PCS Red Coll	1800/508	BS	4820A		Wharton Hole	ΔRA -0000 (~~-1-00~~) 358 Δ Dec 00 02 23. Dome turning 221040 A/B up 40	
		3-4	B 7.92								Loud Train @ 2303	
10	300											
20	750	3"	V 7.93	FHB						phot std		
10 →	300 350											
30	1200		V 7.58	FHB A						phot std		
50/10 →	2500 300 350	3-4	V 6.45	G8Vp						std vel	some cloud	
50	2100	ND	-2.0							THG is 1 megabyte		

303

Emulsion Batches:

Date 26/27 March Observers KK. Tests. during Day/Tn (mKichaking)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
3113.HRT	Hartmann - In							Tu-Ne Fudl	180
3114	Hartmann - Out							"	180
3115	Hartmann - Out							"	200
3116	Hartmann - In							"	180
3117	Hartmann - In							"	180
3118	Hartmann - Out							"	180
TAG PCS 00045.mKi	Flat started by ~~BAK~~ KK			~17	~18 30	0 0	platform	TUNG A=1/8	5400
46.Tn	Flat			18 4650	19 2930	(To 1st posn moved)		n	~~540~~
47.Tn	Comp at MWC ~~560~~ posn			1936			Dec Drum	FeAR H 1/4	330
00048.Tn	MWC 560	07 2101	-07 32 12	19 4400	22 3200	03 07W	-7 41		
49 *	Comp (* extension forgotten I guess)							FeAR A 1/4	330
50.Tn	MD 52961	06 58 1	+10 55	22 4450	22 5943	3 56W	+10 50		33
51.Tn	Comp			23 0120	07 33			FeAR A 1/4	330
52.Tn	Flat			23 2030	01 2107			TUNG A 1/8	7200

Spectr. Temp. ..... Dome Temp./Hum. -2°C 51% at 19EST Transparency Conditions .. P.A.R.T. Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -5°C 70% → completely cloudy

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
250											
"										shift OUT - IN = 4.3 pix	
"											
"											
"										after 13 'S' steps net	
"										shift OUT - IN = 0.0 pix	
A B											
	ND 2.0			PCS Tag Red Coll	1800/508	BS	4820Å				
10/2100	ND 2.0										
7/95	no ND									encoder setup Righton	
8/80	poor ~~v~~ ≥95		B mag on MTR 17 reported				@ 916	noise? Dec!	@ 20 5800	XMIN 161 XMAX 3940 Clear Sky now	2.8 pix
7/80								→	~~BIG~~ TRAIN	@ 21 22, vibrated stellar image	
0 300 *			OK at 1st, but in cont of cloud				by 2250		Tag 161-3940	TAG copied to MARK IIA	
0 90									2 highest Comp lines	≥ 1000/333 secs	
0 2000	ND 2.0									≤ 3 photo/pixel/sec	

305

Tues-Wed

Date 1990 MAR 27.128 Observers .T.n.....MK.planets...

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0003.KK	Flat				18 ≈ 40	0 0	platform	JUNG A 1/8	3600
54.TN	Comp				1921				333
55.TN	MWC560	07 21 01	-07 32 12	19 26 22	22 35 00	3 13 W	-7 41		
0056.TN	Comp				22 41 35			FEAR A 1/4	333
0057.TN	HD52961	06 58 01	+10 55	22 45 35	23 13 40	4 14 W	+10 51		
58.TN	Comp			23 14 48			Reversed		333
59.TN	BM CASS	00 48 6	+63 33	23 32 20	00 40 00	11 50 W	+63 59		
60.TN	Comp							FEAR A= 1/2	333
61.TN	HD109995	12 34 01	+39 51 28	01 13 48	01 38 40	01 05 W	+39 26		
62.TN	Comp							FEAR A-1/4	333
63.TN	BD+26 2606	14 46.51 1950	+25 54 39	01 50 30	02 29 30	00 13 E	+25 46		
64.TN	Comp				02 36 00				333
65.TN	HD132737	14 55 6	+27 33	02 38 25	02 56 00	00 01 W	+27 15		
66.TN	Comp							FEAR 1/4	333

Spectr. Temp. ..... Dome Temp./Hum. −11°E 51%H Transparency Conditions .. FINE .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Fans on & Dome open by ~~19:57~~ by 18:45

Seeing very fine Haze + Cloud to end

Exp. Mtr. #	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30	2050	ND=20			PCS Red Coll	1800/5018	BS	4820Å				
5	90	no	ND	Diff	IN ~~OB~~ always							
10	300	<2	B= 9.6		cuts to	500/sec ~~cts~~	Signal	much lower	by	22 hrs (slight haze down there) To ~~11:17~~ King	# Beta Eri showing within 1 min	
	5							07 37	Big	Dome move	Had been partobscured	
10	100											
10	1300*	2"	B 7.92	A?	* cuts to	1800/sec		drift off @ 06 30 (P time)			Time Tagged To ~~11:17~~ King	
10	90											
5	110	3-4"	V= 9		Fld Drawn from		(upper Small	Finder) Finder	(check it)	Humidity = 64%?	Hazy down at Hor. & ht. heard switch come on	
10	200											
10	1600	<2*	V 7.58	FHB A	* more like 2-3"		mostly	→ ~~1300~~ cnts/sec		Sp phot Std	AT Zenith now ↑ Note Highest count with image to upper Right of > 2000 cnts when there	
			B=									
5	170	<2	10.1		Cnts to	280/sec	Then	hazy		Sp phot std	Time Tagged accidently Fld Drawn also	
2	95											
30	900	2-3	V 8.07	KOH				Fld drawn		std vel	~~24 ht ± 0.3 hr/sec~~ hazy - seeing going	
0	60		~~8.02~~	~~KOH~~								

307 #2

Date 1990 MAR 27/28 .... Observers J.T. .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
67.TN	HD140913	15 41.1	+28 47	03 0324	032700	00 12E	+28 33		
68.TN	Comp			0328				FeAR H 1/4	333
69.TN	Flat			033700	043800	00	platform	TUNG H-1/8	
	MAR 28-29	(Cloudy/clear) FANS on Dome open by 1910					Dome T=+3°C		
PCS 000 70.TN	Flat (Tn Mtphenain)			18 4638	19 1717			TUNG AYS	7300
PCS 71.TN	Comp			19 2010			Dec Drum Read	FeAR H=1/4	333
TAGH PCS 72.TN	MWC560	07 2101	-7 32 12	193230	21 2042	0303 W	-742		
PCS 73.TN	Comp			21 2152				FeAR H-1/4	333
TAGH PCS 74.TN	HD52961	06 58.1	+10 55	22 3027	23 1018	0415 W	+10 51		
PCS 75.TN	Comp			11 15				FeAR H 1/4	333
PCS 75.TN	HD86986	09 5704	+15 02	23 2220	23 4906	01 55 W	+1439		
PCS 76.TN	Comp								333
PCS 77.TN	SKY	12 0000 present	-0725	23 56 36	00 0955	0033 W	-738		
PCS 78.TN	Comp							FeAR H 1/4	333
PCS 79.TN	HD90861	10 24.3	+29 05	00 3720	005309	02 32 W	+2841		

Spectr. Temp. ..... Dome Temp./Hum. -32°C H74% Transparency Conditions Hazy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 90% outside

TIME TAGGED OBS counted x min 161 x max 3490

Exp. Mtr. 4 B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30 500	2"-4"	V 8.21	GOV	PCS Red Coll	1800/5008	BS	4820Å		std vel	Fld drum hazy	
10 95											
30* 1900	ND	2.0		Counts rose to 90*/2000 when finally right to platform						PCS written To H:MIKITAG	
					All PCS files copied To H: MIKITAG						
80 2100	ND	2.0		should be all the same as for 69.TN							
5 95	no	ND									
10 100	2"	V 2.95		PCS Red Coll	1800/508	BS	4820Å		TIME TAGGED Obs pgm	* Hazy at start too Sky a 10 above dark @ start	
10 75	seeing going ⇒ 4"-5" by .21 EST								Big Dome move e	2025 getting hazier and too many unsharply obscuring	
30 600	3"-4"	B 7.92	A						Fe pgm	Time Tagged to H: MIKITAG	
30 600	3"-6"	B 8.05	FHB A						Sp Phot Std	some cloud	
7 90											
<10/s1>10				Hazy, like when doing 0.UVC560					SKy (drive on)	one Dome move e 0029	
6 100											
50 1800	2"-3"	B 7.2	K2I	cnts to 2700/sec					std vel	SI Hazy NE's brightest of pair	

309 pg #2

Emulsion Batches: .....

Date 1990. MAR 28/29.... Observers JN.....Mtn. still. pharmacy

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
PCS 80.JN	Comp			5400		0 25W	+34°		
PCS 81.JN	H109995	12 3401	+39 51 28	010031	012100	0057 W	+3925		
PCS 82.JN	Comp							Fe AP A 1/4	333
PCS 83.JN	HD132737	14 556	+27 33	01 2750	01 5844	0052 E	+2715		
PCS 84.JN	Comp			01 5749				Fe AP A=1/4	333
PCS 85.JN	HD 140913	15 41.1	+28 47	Approx 02 0630	02 4313	0053 E	+28 33		
PCS 86.JN	Comp			024430				Fe Hr A=1/4	333
TAG PCS 87.JN*	BMCASS	00 486	+63 33	Approx 0200	03 2700	0919 E	+6403		
PCS 88.JN	Comp			0329		"	"	FEAR A=1/4	
PCS 89.JN	Flat			033930	045900			TUNG A=1/8	
	MAR 29/30								
PCS_DARK.1M4 TAG-DARK.1M4	DARK			12:31	20:33	Platform			8hr
PCS1040.SA2	Flat			21 38	22:38	Platform		TUNG 1/8	3.00

Spectr. Temp. ..... Dome Temp./Hum. -01°C 50% Transparency Conditions Sl. Hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0	120				PCS Time TAG	1800/150.8	BS	4820Å				
70	2100	2"	V 7.58	FHB A	Red Cell					Sp phot std		
10	110											
55	1100	2"	V 8.07	KO IV						std vel		
6	110											
30	600	3"	V 8.21	GO V						std vel	Cloud coming	
~~5~~	~~90~~											
5	60	4"	V 9			A bit too hazy down here				Obs pgm	* Limited Time TAG Time TAG 1000 x max 2000 x MAX FOR HB	
10	100										good encoder Test T.	
50	3100		ND 2.0									
30	2100		ND 2.0								TAS deleted	

311

Echelle Refocus Tests

Date 1990 April 4 Observers KK w/ interference filter

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
0	Flat – no filter								10s
1	" "								10s
2	Flat – 5105Å	interference	filter behind slit						20s
3	"	"							30s
4	"	"			after retraction and return almost in				30s
5	Th-A	"						Th-A	30s
6	"	clear						Th-A	20s
7	Flat – clear = no filter								10s
PCS00091 OSAS	Flat			18:48	19:49			TUNG 1/8	300s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					.4394	50μ	5170Å				1170
										archived as FILTER.DAT	
?/2000				PCS (RC) Time lag	50.8 1800	BS	4820Å				

313

Date 1990 Apr. 5/6 Thu/Fri Observers Tn / SAS

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
8	Comp								20
9	HD 137909 BC,B	15^h 23.7	+29 27	2:26	2:39				
10	Comp			2:40					

Spectr. Temp. ..... Dome Temp./Hum. -1.3°/55% Transparency Conditions. Clear - Some haze - light cloud Then heavy cloud

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	~~Grating~~/ Ech Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
"				Echelle/ Reticon	17.10	50μ .281	.4384 n=5160Å	110	KK prgm	dewar tilt 3°.2	1672
305	bad	V= 3.66	F#p							cloud	7816
											1724

315

Pg #1

Date 1990 Apr 6/7 Fri/Sat Observers Tn/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0	Prompted flat								
1	Dark								2hrs
2	Comp			19:19				Th A	20s
3	HD 47105 γ Gem	6h 31.9	+16° 29	19:24	19:38	1h 43 W	+16 27		
4	Comp							Th A	20s
5	HD 47105 γ Gem	6 31.9	+16 29	19 40 36	20:11	2h 16 W			
6	Comp			20:12				Th-A	20s
7	Comp			20:18				Th-A	20s
8	HD 56986 δ Gem	7h 14.1	+22° 10	20:21.5	21:14	2h 38 W	+22 04		
9	Comp			21:15				Th A	20
10	Comp			21:22				Th-A	20
11	HD 76644 ι Uma	8h 52.4	+48° 26	21:23	22:11	1h 56 W			
12	Comp			22:12				Th-A	20s
13	Comp			22:34				Th A	20s
14	HD 8890 Polaris	1h 22.6	+88° 46	22:36	23:29	10h 05 W	Reversed +89 10		

Spectr. Temp. ..... Dome Temp./Hum. 0°/43% ... Transparency Conditions . Some thin cloud ... CLEAR ...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... topped about @ 19h

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion x hot	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	17 to 10	50μ .281	A384 λ = 5160Å	110	KK prgm	denser tilt 3°2	
											1458
4100	POOR	B= 1.9	A0 IV						Asm Sp - KK		1006
620											1551
8340		B= 1.9	A0 IV								2014
											1596
											1581
3166		B= 3.9	F0 IV								688
											1622
											1670
1130		B= 3.32	A5								1111
											1641
											1412
7077		2.02	F8V								3144

317 Pg #2

Date 1990 Apr 6/7 Fri/Sat Observers Tn/SAS

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
15	Comp			23 31				Th-A	20s
16,17,18	3 flats @ 28sec			3092, 3168, 3120					
19	Comp			23:47				Th A	20s
20	HD 121370 η Boo	13h 49.9	+18°54	23:56	00:41	0h 29 E	+18 30		
21	Comp			00:42				Th-A	20s
~~22~~	~~HD 124897 α Boo~~	~~14h 11.1~~	~~+19°42~~						
22	Comp			00:47				Th A	20s
23	HD 124897 α Boo	14h 11.1	+19°42	00:51	00:56				
24	Comp			00:57				Th H	20s
25	HD 124897	"	"	00:59	01:09	0h 22 E		λc 5104 Trans x=55%	
26	Comp			01:10				Th A +filter	20s
27	Comp			01:12				Th A +filter	20s
28	Comp			01:13				Th A	20s
29	HD 124897	"	"	01:19	01:39			Filter	
30	Comp			01:40	~~02 01~~			Th A	20s

Spectr. Temp. ..... Dome Temp./Hum. -2/52% Transparency Conditions ..... 3/4 haze .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Filt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	~~#~~ 17.10	50μ 0.281	·4384 (λ=5160Å)	110	KK night		1413
										Tc+1C.17c Topped up @ 23:44	
											1577
5000	bad	B- 3.27	6¢								1319
											1669
											~~1370~~
											1711
7000		B -0.04	KEIII								1583
		B 0.64	KEIII								1706
165		-.04	KEIII							With Filter	901
										With Filter	245
										~~No~~ With Filter	249
										No Filter	1855
316										With Filter	1734
										No Filter	1692

319 P3

Date 1990 Apr 6/7 (Fri/Sat) Observers TM/SAS

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
31	Comp			01:44				ThA	20s
32	HD 137909 β CrB	15h 23.7	+29 27	01 48.7	02 01	00 42E	+		
	Comp							ThA	20
	Flats x 4	14secs; 1816 ADU, 1765, 1759, 1706,				00 42E	+	Flats extending	
	Flats x 2	2secs for weak exp. ≈ [240 ADU]				00 42E	+	posn of βCrB	
	Flats x 4	7secs; (993, 983,)		14sec; (2029, 2014)		00 00	near platform		
	Flats x 2 with INT FILTER	45secs; (1694, 1690 ADU)				"	"		
	DATA BACKED up to Floppy Apr0790.DAT								
	+ Repacked on C drive to Apr0790.DAT and HApr0790.DAT								
	Ref.DAT deleted from C drive								

Spectr. Temp. ..... Dome Temp./Hum. -3°C / 57% Transparency Conditions ~~S~~ Hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion x Grat	P.H.	Program	Remarks	Quality
				Echelle Reticon	17·10	50μ .281	#4384 λ=5160Å	110	KK prgm.	No Filter ↓	1767
386		B= 3.93	FΦ₂							Cloud by 2 EST	103
											1774

321 Tour ~160 people viewed Jupiter

Sat/Sun

Date 1990 Apr 7/8 Observers TN/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
0	Flat prompted			23 04 29					15 sec
1	Comp while on α Leo							Tr. A.	20
2	HD 87901 α Leo	10h 03 03	+12 27	23:10	23 20	1 58 W	+	no Filter	
3	Comp								20s
4	HD 87901	"	"	23 22	00h 00	2h 38 W		Filter	
5	Comp			00h 01					20s
6	Comp			00:13			Reversed		20s
7	HD 8890 Polaris	1h 22.6	+88° 46	00:16	00:38	11h 18 W	+89° 09		
8	Comp			00:40					20s
9	Comp			00:50			Unreversed		20s
10	HD 137909 β Cr B or	15h 23.7	+29 27	00:52	01:54	00 45 E			
11	Comp			01:55					20s
12	Comp			02:02					20s
13	HD 121370 η Boo	13h 49.9	+18° 54	02:06	02 45	01 39 W	+18 28		
14	Comp								20

Spectr. Temp. ..... Dome Temp./Hum. -1°/60% Transparency Conditions ... Clear, hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Topup before start ≈ 23 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ ~~Filt~~	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle/ Retcon	17.10	50μ .281	.4384 λ = 5160Å	110	KK progm		2167
											1733
5100		B 1.02	B7V							No INT FILTER **	1468
											1700
		"	"							INT Filter in beam	1806
											1710
											1674
5100(?)	bad	2.02	F8V								1710
											1718
											1659
3000		B 3.93	FØp								1014
											1652
											1639
5700		B 3.27	GØ							Dewar T = +0.173 thin cloud	1427
											1623

323

PZ Sat/Sun

Date 1990 Apr 7/8 Observers SAS/TA

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Ex
15	Comp							THAR	20s
16	2B00	14h 11.1	19°42	02:54	02 59	1 32 W			
17	Comp							THAr	20s
18	2 Oph AD 5561	17 30.3	+12 38	03 12					
18	Comp			N03:10				THA	20s
19	HD159561 2 Oph	17h30.3	+12°38	03.12	0336	1 10 E	+12 36		
20	Comp			N03:38				THA	20s
21	Comp			03:42				THA	20s
22	HD161096 β Oph	17h38.5	+4°37	03:44	04:30				
23	Comp			04:31				THA	20s
24	Comp			04:34				THA	20s
25	HD172167 α Lyr	18h33m33	+38°41	04:36.5	04:40				
26	Comp			04:41				THA	20s
27	HD172167 α Lyr	"	"	04:42	04:53			Fels	
28	Comp			04:55				THA	20s
	Flats	4 @ 9 Med 10	1074, 961, 1054, 1067			4@ 17s	1804, 1775, 1771		

Spectr. Temp. ..... Dome Temp./Hum. -2°/73% Transparency Conditions Cirrus.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. -4/73%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
									[redacted]		1669
5400		B -0.04	K2 III						std vel		1541
											1655
~~2.2~~		B ~~2.2~~	~~A5 III~~						~~KK prgm~~		~~1696~~
											1646
5100		B 2.2	A5 III						KK prgm		1476
											1723
											1742
5000		B 3.93	K2 III						St. vel		1283
											1680
											1742
5000		V .03	A0 Va								1706
											1692
253										with filter	1231
						DUCKED UP TO FLOPPY + renamed					1850
1765										APRO990:DAT	

· 325

Sun/Mon

Date 1990 Apr 8/9 Observers K.K./Tw/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
		1987.5	1989.5						
X	β Tau	05 25.7	+28° 36		19 44				
Y	β Gem	07 44.7	+28° 03	19 51	19 54	01 00W			
Z	α Hya	09 27.1	-8° 37	20:00					
AA	Π Uma	13 47.1	+49° 22	20:08		0448E			
AB	σ UMa	08 29.4	+60° 45	20:17		0042W			
0	Prom Ted Flat			20:55					15 s
1	Comp			20:56				Th-Hr	20 s
2	HD47105 γ Gem	6h 37.0	+16 25	20:58	21 18.5	0332W	+16 28		
3	Comp							Th-Ar	60 s
4	Comp at Polaris pos.							Th-Ar	20 s
5	Polaris HD8890	1 22.6	+88 46	21:36	21.52				
6	Comp			21.55				Th-Hr	2 s
7	HD8890 Polaris	01h 22.6	+88° 46	21.57	22:15				
8	Comp			22:16				Th Ar	20 s

Spectr. Temp. ..... Dome Temp./Hum. +4°C 48% H Transparency Conditions ..... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Fans on; dome opened by 19:15

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2x5s		2x10s		2x20s	35mm camera		V=1.6		Hartmann mirror figure tests		
3x5s		3x10s					V=1.1				
2x5s,		2x10s,		20s,	30s		V=2.0				
2x5s,		2x10s,		2x20s			V=1.8				
2x10s,	cloud,	2x20s,		2x40s			V=3.4				
				Echelle/ Rubicon	Echelle Grat 17.10	50 μm .281	X grating 4384 λ=5160Å	ORDER 110	KK prgm		1790
											1528
5000		B 1.9	AOIV							Dewar T= +0.14	1630
											1366
											1341
3500	poor	B 2.07	F8V								896
											1303
		"	"								1017
											1518

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P2

Sun/Mon

Date 1990 Apr 8/9 Observers T~/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
9	Comp							TLA	20s
10	HD 87901 αLeo	10 03 03	+12 27	22:28	23:38.5			NO FILTER	
11	Comp			22:39				TLA	20s
12	HD 87901 αLeo	"	"	22:40.5	23 22	02 04W	+1205	FILTER	
13	Comp (x4)								20
14-17	Flats with filter at αLeo posn,			40secs 1211,	38secs 1150,	38sec	1139, 39sec	1166	
18	Comp			23:35				Th Ar	20s
19	HD 137909 βCrB	15h 23.7	+29° 27	23:41	00:19	02 17E			
20	Comp			00:20				TLA	20s
21-24	Flats	@8 sec	1103,	1095, 1100,	1099				
25-28	Flats	@ 12 sec	1636,	1634, 1614,	1619				
29	HD 137909 βCrB	15h 23 7	29° 27	00:31.5	00:52				
30	Comp			00'54				ThA	20s
31-34	Flats	4@ 2s	246, 25	3, 255,	249				

Spectr. Temp. ..... Dome Temp./Hum. 44°/50% Transparency Conditions ..... Clear .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
											1498
4502	bad	B 1.2	BLV								1350
~~30~~											1637
304		"	"							With filter	1174
650										no f./Ha	1550
										F./Ha back in	
										Trans topped	1645
900		B 3.93	FOP							Topped 2330	263
										Cloud	1589
										at ∓ CrB position	
										"	
833		"	"							done again	241
											1575

329

Date . April 9/10/11/12 Wed/Thurs Observers TM/SAS

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
Flat 0									10^s
Dark 1	2 hours								
Dark 2	2 hours								
Dark 3	2 hours								
Dark 4	3 hours								
PARKS	3 hours	~~April 12~~ No Light at all		1902	2053	0 0	platform		
Apr 11/12 6	Comp @ Capella			21:14				TM-Ar	20^s
↓ 7	Capella α Aur	1990.5 $5^h 15.9$	1990.5 $+45° 59$	21:16	21:31	$5^h 19$	$+45° 02$		
8	Comp			21:32				TM-1	20^s
9	Comp for Regulus							TM-A	20^s
10	HD87901 αLeo Regulus	1900 $10^h 03$	$+12° 27$	21:45	22:08			NO FILTER	
11	Comp			22:09				TM-A	20^s
12	HD87901 αLeo	"	"	22:12	23:32		$+12 03$	FILTER	
13	Comp			23:33				TM-Ar	20^s
14,15,16,17,18	Flats	@ 30^s	1010,	@ 25^A 828, 830, 831, 827				Filter	

Spectr. Temp. ..... Dome Temp./Hum. 0°/65%. Transparency Conditions ..Scattered clouds...

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ ~~Filt~~	Slit	~~Emulsion~~ order	P.H.	Program	Remarks	Quality
				Echelle/ Reticon	~~Echelle~~ 17 10	50μm 0281	04384 λ = 5160	110	KK prgm		1010
										dewar tilt 3.2	
										dewar tipped @ 21h	1631
5000	really bad!	V 0.08	G6III						TK pgm		950
											1649
											827
7500	11	B 1.2	B7V								904
											1638
444	11	B 1.2	B7V							With filter	850
											829
										With filter	

331 pg#2

Date 1990 April 11/12 Wed/Thu Observers SAS/Tn

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
19,20,21,22	Flats	@ 8h	1004, 1005, 999, 1001						
23	Comp					encoder	Reversal	ThAR	20s
24	HD8890 Polaris	01h 22.6	+88° 46	00:07	00:58	11 55 W	+8909		
25	Comp			00:59				ThAr	20s
26	HD 8890 Polaris	01 22.6	+8846	01:00	01:37	12h 32 W			
27	Comp			01: 38				ThAr	20s
28,29,30,31	Flats	@ 12h	1589, 1591, 1589, 1594						
	Backed up to Apr 1990 . Dat								

Spectr. Temp. ..... Dome Temp./Hum. -2.7°C 69% Transparency Conditions ..Hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....Strong Aurora @ 1:00

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Echelle Ref	Echelle 17.10	50µm .281	.4384 x grating 5160Å	ORDER 110		No Filter	
											1703
4900	POOR	B 2.02	F8T								1530
											1749
3360	bad	"	"							Cloud	974
											1823
										Topped Up 01:50 T = .166	

333

Thurs-Fri

Date 1.9.90 APR 12/13 Observers T. /. Inki

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FIT 0 1.Sc TAG 0 0 1.Sc	2 hr DARK				SAVED @ 15:14	0 0	platform		
PTS TAG 00092.Inki	Flat [File renamed to 00092.Inki]			18 00	SAVED @ 18:58	"	"	TUNG H=1/8	
FIT * 00093.Tn	Flat			20 48 12	21 32	"	"	"	~~7700~~ cut short
FIT 94	Comp			21 38					330
TAG FIT 95	HD 52961	06 58.1	+10 55	21 48 44	21 58 20	4 02 W	+10 51		
FIT 96	"	"	"	21 59 12	22 22 40	4 27 W	"		
FIT 97	Comp								320
FIT 00098.Tn	* HD 86986	09 57 04	+15 02	22 35 14	22 42 30	1 52 W	+14 42		
FIT 00099.Tn	Comp								320
FIT 00100.Tn	Flat			22 52 38	00 52				700
101.Tn	DARK								
102.	Comp								
103	B/A Class	00 48.6	+63 33	01 51 36	02 32	9 13 E	+64 01		242
104	Comp								330
105	Comp								300

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... 1st use of Apr 12/12 software changes. Sum in "FITS" Format

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					PCS TimeTag	1800/508	BS	4820Å				
Probably 30	2400											
30	2400		ND 2.0		* Probably only a narrow Tag called Fit (ie No Sum)					(no IHS there as Filename 7200)	Normal ≈ 2 photons/sec/pixel epoch 1900	
											Focus = 2 755 DomeT = -0.3°C cmt to 1400	
30	900	<2"	B 7.92	A						Fe Pgm	Default time Tag by mistake	
25	1000	<2"	"	"						"		
8	200	<2	—	—							* wrong star Fainter star N of 80486	
16	2300											
8	120		≈9							Obs pgm		
5	90				PCS Time Tag	1800/508	BS	4820Å				
					"	1800/627	BS	Hα				

335 pg #2 Thurs/Fri

Date 1990 Apr 12/13 Observers DMK-Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
106.mkl	Comp	≈ 1h 5min	actual	0419		E	+64°01	Fe Ar Clear	~~≈~~
CO107.Tn	BM Cass	00 48.6	+63 33	042256	≈ 0449	E			1559
108.mkl	Comp								300
109.mkl	HD171232	18 28.5	+25 25	~~≈ 0445~~ ~~045739~~ 045739	~~05~~ 0507~~39~~	01 15 E			543
110.mkl	Comp								
111.mkl	Flat			051958	~~00 5940~~	0 0	platform	Tung A=1/8	~~120~~

Spectr. Temp. ..... Dome Temp./Hum. −10°C ... 73% Transparency Conditions . Mostly cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. −1.0°C ... 75%

Exp. Mtr. A B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				PCS Time tag	1800/627	BS	Hα				
10 150	3"	9							Obs gym	Instead of cloud	
2 1000		~~V~~ ~~7~~3	G8II						stibel	Clear now	
30 2500	ND 2.0								For next nights Hα work also		

337

Pg #1 Fri - Sat

Date 1990 APR 13/14 ..... Observers .MKi.-Tan .....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
112.mki	Flat			18 41	19 43	0 0	platform	Tung A 1/8	
113.mki	Comp						Reversed	Fe Ar A-1/4	330
114.mki	MWC 560	07 21 01	-7 32 12	20 14 33	21 50 50	3 37 W	-7° 43'		
115.mki	Comp							Fe Ar A-1/4	330
116.mki	Comp						W + −	Fe Ar A Clear	300
117.mki	HD 52961	06 58 01	+10 55	22 05	23 05	05 13 W	+10 48		3600
118.mki	Comp						Still Reversed	Fe Ar Clear	
119.mki	HD 109995	12 38 23 (1990.3)	+39 21 41	23 15 14	23 45 15	00 22 W	+39 22		1800
120.mki	Comp							Fe Ar Clear	300
121.mki	Comp							Fe Ar A-1/4	300
122.mki	HD 109995	12 38 23 (1990.3)	+39 21 41	00 03	00 18	00 55 W			900
123.mki	Comp							Fe Ar A 1/4	300
124.mki	HD 156247	17 11 27 (1900)	+1 19	00 44 51	01 00	3 05 E	+01 15		900
125.mki	Comp							Fe Ar A 1/4	30
126	β Lyr HD 174638	18 48 23	+33 15	01 07 21	01 20	4 18 E	+33 23		773

Spectr. Temp. ..... Dome Temp./Hum 4°C ..... 54% Transparency Conditions . Hazy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Comp AST slow by 20 secs

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst. Red Cell	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50	2500	NP	20		PCS Time Tag	1800/62.7	BS	~~H~~ α				
5	80				"	1800/508		4820 Å Hbeta				
10	~~140~~	3"4	9					"		Obs-pgm	cuts to 220/sec	
7	60				PCS	1800/627		6600 Å Hα			Time on AST synchronized at 2, 52	
	70					"		"		Fe pgm		
8	250	3"	B 7.93	A		"		"		Fe pgm	cloud	
						"		"				
10	300	2"	~~BV~~ 7.58	FHB A		"		"		Sp hot std		
						"	1	"				
8	100							4820 Å B Beta				
15	1000		B 7.62	FHB A				"		Sp hot std	Hazy, but cuts to 1500/sec	
								"				
8	400		V 5.7	B5V				"			very hazy - cloudy	
10	400	4"	V 3.03 *4.03	B7Ve + A8p							Cloudy	

339 #2 Fri Set

Date 1990 APR 13/14 Observers MKi-Ts

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
127.MKi	Comp				≈ 01 25			FeAR A 1/4	300
128.MKi	Flat			≈ 02 37	≈ 0337	0 0	platform	TUNG A-V8	7200

Spectr. Temp. ..... Dome Temp./Hum. +22°C. 66% Transparency Conditions ... Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5	90				PCS	1800/508	BS	4820A				
40	230	ND2.0			"	"		"				
											All FIT or Sum Files backed up on 3.5" Floppy to this point. T.	

341

#1 Sun mon

Date . 1990 APR 15/16 . . . Observers . mki-Tn . . . . . .

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
FT00129.mki	Flat			19 03 48	19 ≈ 50			TUNG A 1/8	.
130.mki	Comp			1955			Reversed	FeAr A 1/4	200
131.mki	MWC 560	07 21 01	-7 32 12	20 00 41 ~~19 59~~	22 30 40	A 25 W	-7 47		896
132.mki	Comp							FeAr A-1/4	200
133	Comp						Still Reversed	FeAr A 1/2	200
134	HD 52961	06 58·1	+10 55	22 46 08	≈ 23 ~~24~~	5 40 W	+10 44		1280
135	Comp						Still Reversed	FeAr A-1/2	
136	HD 109995	12 38 23	1990.3 +39 21 41	23 43 36	23 ≈ ~~54~~	0035 W			601
137	Comp								
138	Comp		1990.3			~~W~~		FeAr A-1/4	
139	HD109995	12 38 23	+39 21 41	00 10 48	00 25 50	01 08 W	+39 17		900
140	Comp							FeAr A-1/4	200
141	BM Coss	00 48·6	+63 33	00 37 36	00 58 40	10 35 E	+64 07		200
142	Comp								200
143	Beta Lyr	18 48 23	+33 15	01 14 14	02 14 20	3 16 E	+33 26		300

Spectr. Temp. ..... Dome Temp./Hum. +5°C. 77% Transparency Conditions .. Part cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A	Exp. Mtr. * B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50	1900	NO	2.0		PCS Rel Cal	1800/50.8	BS	HB 4820Å			* cut was 2200 on platform while going reversed	
5	80							"				
10	80	poor						"			some cloud at start	
	80							HB 4820Å				
	200					800/47.4 *		HB * 4300Å		Actually @ 2	4240Å HB To Far left of center	
7	70	poor	B 7.92	A		"		"			Encoder failed in Dec so Ray to this post Dec goes wrong way	
10	200					"		"				
			V 7.58	FHB A		"		"		Sp phot std		
						"		"				
						1800/50.8		H Beta 4820Å				
			B 7.67	FHB A		"		"		Sp phot std		
10	90		≈9									
~~5~~	~~40~~											
6	100											
B 1000-7000		3"	V 3.3 → 4.3	B7Ve + A8p						DIKi pgm	Clouds 01 18	

343 pg #2

Emulsion Batches:

Date 1990 APR 15/16 Observers MKi-Th

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
144 MKi	Comp							Fe Ao 4 1/4	200
145 MKi	Flat			02 31 50		0 0	platform	Tung 4-1/8	720
146 Th	Dark	APR 16/17		20 28 24	22 32	0 0	"		

Spectr. Temp. ..... Dome Temp./Hum. +0.4°C 73% Transparency Conditions ... Cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr. A	Exp. Mtr. B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
7	100				PCS Timetag	1800/508	BS	4820Å				
45	220	ND	20		"	"	"	"			Butted upon 3.5^{-4} floppy to here	
<10	<10	Shutter closed, no light incident OR						wm room		Thunderstorm 2152 EST		

345

Tues-Wed

Date 1990 APR 17/18 Observers MKi-TN

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
FIT0047.mki	Flat			1702					2h13
Fm00239.TN	Seeing Test	HD82582	09343 +4654	1943	1944	0023E	+4658	I=1 x4	"N" wedge
148.TMKi	Comp						Reversal	Fe AR A 1/4	200
149.mki	MWC560	072101	-073212	195526	2216	417W	-746		
150mKi	Comp					"			200
151.mKi	Flat			225227		00		TWG A=1/8	7250

Spectr. Temp. ..... Dome Temp./Hum. +1.5°C 68% Transparency Conditions ... PART cloudy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

FHMS on: Dome shutters open by 1920

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				PCS RodColl	1800/508	BS	H Beta 4820Å				
3/A x 3/B		√ 6.39	A5	4 frames	(N 4	33 Km/hr breeze)		(1 min x 4 = 1/15 sec)		Dome west	On FIBER Feed Head (Southern Hole)
8 100				PCS	1800/508	BS	4820Å				
0 120	3-5"	V 9.5		"	"	"	"			(cloud cut Cuts to 180/sec. 22:05)	
5 65				"	"	"	"				
5 2200		ND 2.0		"	"	"	"				

347 pg#1 Wed Thurs

Date 1950 APR 18/19 Observers MKi-Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
152 MKi	Flat			18 31	19 43			Tung A-1/8	
153	Comp after seeing test HD73992	seeing test 1989.5					Reversal	FeAr A-1/4	200
F/80 240 TM	Seeing test	08 42.7 +34 03 1900		19 50		00 38 W	+39°		20
154	MWC 560	07 21 01	-07 32 12	20 00	21 49	3 54 W	-7 45		
155	Comp							FeAr A-1/4	200
156	Comp at Area D							FeA Clear	240
157	MWC 560	07 21 01	-07 32 12	22 13 51	22 32	1 37 W			
158	Comp @ 5850Å / Comp # 159 Comp @ 4320Å							FeA A-1/4	240
160	HD 52961	06 58 1	+10 55	22 54	23 18	0 54 3W	+10 45		
161	Comp	1950.3					Rever	FeAr 1/4	240
162	HD 109995	12 38 23	+39 21 41	23 26	23 56	00 49 W	+39 18		1800
163	Comp							FeAr A-1/4	240
164	Comp							FeAr A 1/4	200
165	HD 109995	12 38 24	+39 21 41	00 13 49	00 43 49	01 37 W			1800
166 MKi	Comp							FeAr A 1/4	200

Spectr. Temp. ~~49°~~ Dome Temp./Hum. +5.5°C 49% Transparency Conditions Fine

Focus

Spectr. Temp. Dome Temp./Hum.

FHNS on by 19EST

Dome opened 19 40EST Due to ~~FHS~~ Flat in progress

Exp. Mtr. A	B	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		ND	2.0		PCS Red coll	1800/508	BS	4820Å				
8	110											
Int ~~x~~ 4		4	VT15 Frames	MIII	Dome	South		Light SW wind		Not in Obidos on link III		
10	160	2"-4"	V= 9		PCS Timetag	1800/508	BS	4820Å		Obs pgm	counts to 2800/sec H Beta Emm obsvns in 1 min	
10	80					1800/508						
7	70				PCS Timetag	1800/575		5850Å		Na D area	Moved grating to Na D area	
7	80					"		"				
6	70					1800/476		4320Å				
5	130		B 7.92	A		"		"				
~~90~~	~~800~~					"		"				
20	800	2"-4"	~~B~~ 7.62	FHB A		"		"		Sp phot std	(At Zenith now) counts to 1400 with image upper right of hole	
10	90					~~1800/476~~		~~4320Å~~				
10	95					1800/508		4820				
25	1200	3	B 7.62	FHB A		"		"		Sp phot std	Sky s/hazy counts to ~~3~~ 2500/sec now/ counts to 3000/sec	
13	100					"		"				

349 pg #2 cont

Date 1990 APR 18/19 Observers mki-Tq

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
167.mk1	Comp -64Å center further Red than previous							FeAr A=1/4	200
168	HD109995			005356	01 38	W	+39 18		
169	Comp							FeAr A=1/4	200
170	Comp							FeAr Clear	200
171	Comp						unreversed	FeAr clear now	200
172	Bm Cass	1900 0048.6	+6333	020744	0247	E	+64 04		
173	Comp							FeAr Clear	200
174	Flat			0302		0 0	D/4 Fern	TUNG A 1/8	7200

Spectr. Temp. ..... Dome Temp./Hum. +3.7°C 61.6% Transparency Conditions ..Sl. hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +2.6°C 64%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Red Collimator	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
13 100				PCS TimeTag	* 1800/51.2	BS	4884Å			*.4° change = 64Å → Red	
30 200	2-4"	B 7.62	FHB A		"		"		Sp plot stel	H Beta just blue of center	
10 75											
					1800/62°			}	not sure if grating Angle changed		
3 64		V			1800/62.5		H2 ? 6500Å	}			
6 100	4-6"	V		PCS TimeTag	"	BS	6500Å			TimeTag al too	
~~10~~ 80					"	"	"				
40 250					"	"	"				

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Sat/Sun

Date 1990 Apr. 21/22 Observers Mki/SAB

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
176 eMki	Comp							FeA 1/4	200
177	Star NE of Regulus			23:44					1000s
178	Comp							FeA 1/4	200
179	AD Leo	10h 16 54 (1950)	+20 7 18 (1950)	00:12	00:42				1800s
180	Comp							FeA 1/4	200s
181	HD 109995	12h 36 26 (1950)	+39°34'58"	01:06	01:36				1800s
182	Comp			01:37				FeA 1/4	200s
183	Comp			02:13				FeA 1/4	200s
184	BD+26 2606	14h 44m 51s (1950)	+25°54'39"	02:18	03:18	2h 12W	+25°51		3600s
185	Comp			03:19.5				FeA 1/4	200s
186	Comp @ BM Cass			03:38.5				FeA 1/4	240s
187	BM Cass	00h 48.6	+63 33	03:43			+64°05		1200s
188	Comp			04:06				FeA 1/4	200s
189	Flat	platform					ND 2.0	Tung 1/8	7200s

Spectr. Temp. ~~42°~~/..... Dome Temp./Hum. 6°/..75%.. Transparency Conditions . haze.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. . 5°/.86%. Tour ~120 people viewed Jupiter + ε Boo

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				PTS Red Coll	1800/ 58.8	BS	4820Å		Mki prgm		
										Did by mistake	
7/90	bad	V 9.4									
10/120											
20/800	5"	V 7.6								No tag	
10/120											
10/100											
10/130	4"	V 9.86	sdF							No tag	
10/90											
10/100											
10/100		V 8.32- 9.53								No tag No header	
10/100										FOG. Tuck!!	
30/2100										On timer	

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Sun/Mon

Date 1990 April 22/23 Observers SAS / Miki

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
190-mki	Flat at 4820Å	PLATFORM		18:23	19:23		ND=2.0	Tung 1/8	3600s
191	Comp at 4820Å			20:19				FeA 1/4	200s
192	~~MWC 560~~	~~07h 21~~	~~-7° 32~~						
192	Comp at 5900Å			21:34				FeA clear	200s
193	~~Comp~~ HD52961	6h 58.1	+10° 55'	21:39	22:58	5h 42W	Reversed +10° 45'		
194	Comp			22:59				FeA clear	200s
195	Sky near HD52961	"	"	23:04					400s
196	Comp			23:11				FeA Clear	200s
197	Comp			00:25			UNREVERSED	Fe1 clear	200s
198	HD109995	1950 12h 36m 24s	+39° 34' 58"	00:30	01:10	2h 19W	39° 29		2400s
199	Comp			01:28				Fe A clear	200s
200	HD 114762	1900 13h 07.5	+18° 02	01:34	01:43	2h 18W	17° 40		560s
201	Comp			01:45					200s
202	Flat	~~Zen~~	"	02:07	03:07	2h 24 W ND 2.0+0.3		Tung 1/8	3600s
203	Comp at BM Cass			03:26				FeA 1/4	200s
204	BM Cass	1900 00h 48.6	+63° 33	03:31	4:18	6h 49E			2800s
205	Comp			04:19				FeA 1/4	200s
206	Flat			04:39			ND 2.0	Tung 1/8	7200s

Spectr. Temp. ..... Dome Temp./Hum. 14°/62% Transparency Conditions ..heathaze/cloud/354 or haze

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 10°/66%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/2000				PTS Red Coll	1800/ 50°.8	BS	4820Å		Mki pigm		
10/70											
										too much haze!!	
10/100					1800/ 58°.3		real center 5900Å			Prog wants λ=6000 Changed to tilt = 583	
15/500	3-4"	B 7.92								No TAG counts fell to 200 in 1 hr	
10/90											
~10											
20/90										cloud & haze	
10 100 10/600	2.5	V 7.6							SP phot Std	hazy No TAG	
10/130											
15/900	2".5	V 7.31	df7						St Rad Vel	No TAG	
10/120											
30/1700											
10/80					1800/ 50°.8	BS	4520				
10/100 7190		V 9								No tag	
30/2305											

Emulsion Batches:
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Date ..... Observers .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.

reversed = Telescope W of pier

unreversed = Telescope E of pier